

CONSTRUCTION SPECIFICATION

1. Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet.
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)

NO SCALE

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where permanent long-lived vegetation cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding. If not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 urea-form fertilizer (9 lbs/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre 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 tons/acre well anchored straw.

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/8 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 (.9 gal/1000 sq ft) for anchoring.

Maintenance: Inspect all seeded 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, discing or other acceptable means before seeding, if not previously loosened.

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

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushels per acre of annual ryegrass (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 February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/8 gal per acre (.5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348 gal per acre (.9 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

Sediment Control Measures will be implemented in accordance with Section 219 of the Specifications

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.

Stephen S. Fink 7/27/88
SIGNATURE DATE
U.S. SOIL CONSERVATION SERVICE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

APPROVED:
Stephen S. Fink 7/27/88
Howard S.C.D. DATE

DEVELOPER'S CERTIFICATE

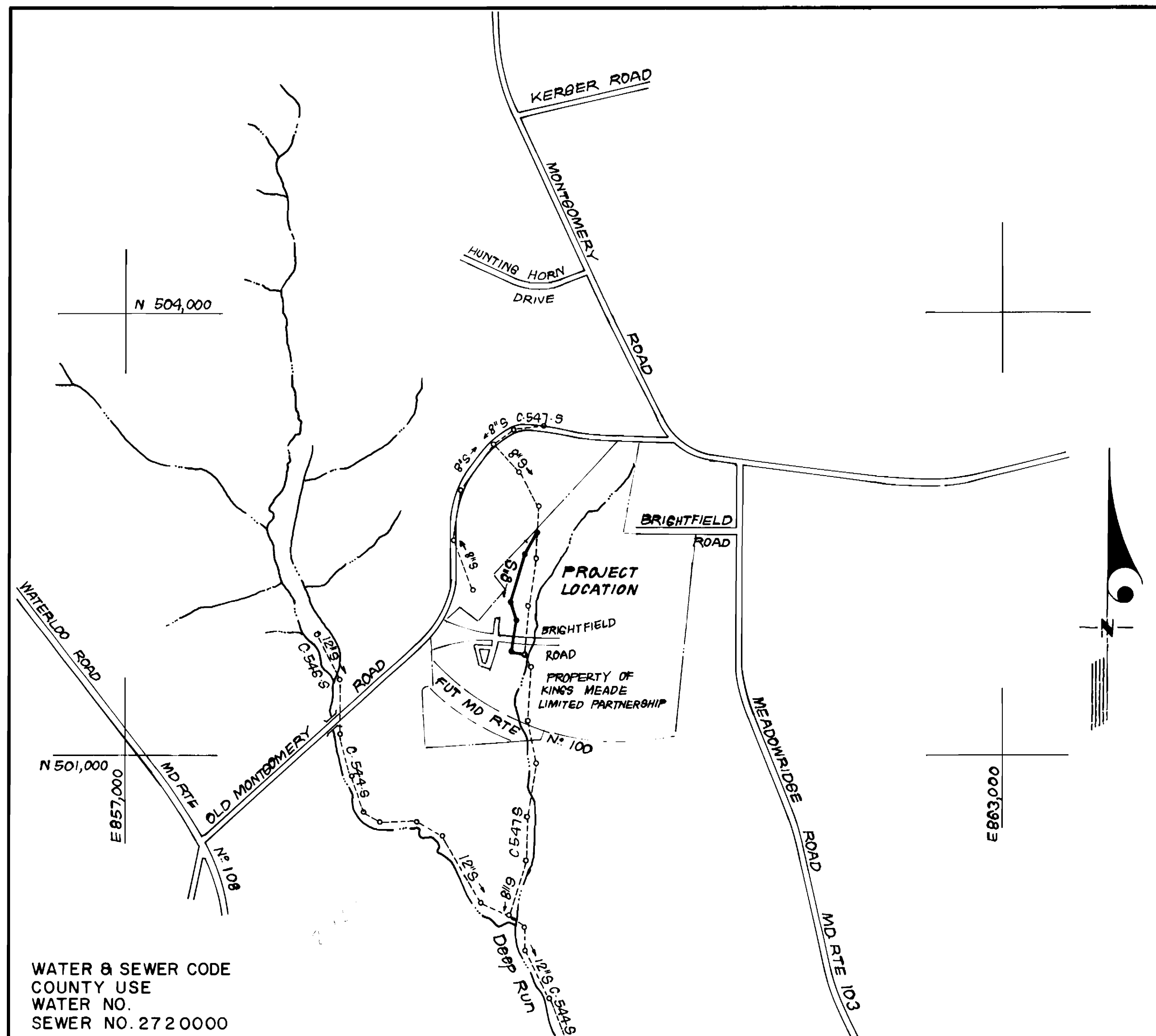
"I/we certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training 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 or their authorized agents, as are deemed necessary."

Rodolph May Jr. 7/14/88
Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE

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.

Jeffrey J. Schaub 8/21/88
Signature Date



WATER & SEWER CODE COUNTY USE WATER NO. SEWER NO. 272 0000

VICINITY MAP
SCALE: 1" = 600'

TYPE OF BUILDING	N/A
NO. OF LOTS	0
NO. OF WHC's	0
NO. OF SHC's	0
DRAINAGE AREA	Patapsco

GENERAL NOTES

1. 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 Inspector, at the contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates.
3. All vertical controls are based on U.S.G.S. Datum.
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. Any cost incurred to the contractor for tunneling or bracing at poles shall be included in unit prices bid for excavation and backfill.
6. For details not shown on the drawings use Howard County Standard Details.
7. For materials and construction methods use Howard County Standard Specifications and Howard County Design Manual, Volume IV. The Contractor shall have Volume IV on the job.
8. Contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in the vicinity of proposed utilities at his own expense.
9. Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans.
State Highway Administration - 531-5533
Baltimore Gas & Electric Company - Underground Damage Control - 859-9004
Baltimore Gas & Electric Company - Contractor Services - 850-4620
Baltimore Gas & Electric Company - Trouble Shooting - 298-9001
"Miss Utility" - 1-800-257-7777
Chesapeake & Potomac (C & P) Telephone Company - 1-800-257-7777
Bureau of Utilities Howard County - 992-2366
Colonial Pipeline Company - 795-1390
10. Trees are to be protected from damage to maximum extent. Trees located within the construction strip are not to be removed or damaged by the contractor.
11. Contractor shall remove trees, stumps, and roots along line of excavation as directed by the Inspector. Payment for such removal shall be included in the unit price bid for excavation and backfill.
12. Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
13. All water mains to be D.I.P. Class 52 unless otherwise noted.
14. Top of all water mains to have a minimum of 3-1/2" cover unless otherwise noted.
15. Valves adjacent to tees shall be strapped to tees.
16. Block all fittings with concrete.
17. Bury line elevations on fire hydrants shall be set to the 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 to be compacted in accordance with Sections 1003 & 1008 of the Standard Specifications.
18. All water house connections shall be for an inside meter setting.
19. The contractor shall not operate any water main valves on the existing system.
20. All sewer mains shall be C.S.P.X., V.C.P.X., P.V.C., or A.C.P. Class 2400 unless otherwise noted.
21. The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
22. All manholes shall be 4'-0" inside diameter, unless otherwise noted.
23. Water main and water house connection lines must have a minimum of one foot separation from the sanitary sewer and sewer house connections as they cross. Except at crossings, water and sewer lines shall have a minimum horizontal separation of 10'.
24. Manholes designated thus: WT, shall have a Watertight Frame and Cover.

CONTRACT NO. 10-1838 - D
BRIGHTFIELD SEWER RELOCATION

KINGS MEADE LIMITED PARTNERSHIP PROPERTY
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

QUANTITIES			
ITEM	EST'D	AS BUILT	MATERIAL / SUPPLIER
8" S	1,045 LF	800.52'	8" SDR-35 PVC - JM MANUFACTURING CORP.
4' 0" MH	5 EA	5	ATLANTIC CONCRETE PRODUCTS
8" CL 52		244.70'	8" CL 52 PUCTILE IRON PIPE - GRIFFIN PIPE PRODUCTS
8" SDR-35	1 EA.		8" SDR-35 CAP PVC - HARRINGTON CORP.
24" WATER TITE MFC	3 EA.		HOWARD COUNTY SAN. SEWER MFC / DEWEY BROTHERS.
24" WATER TITE MFC	2 EA.		DEWEY BROTHERS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE
Robert R. ... 7-25-88

CHIEF, BUREAU OF ENGINEERING DATE
... 7/29/88

CHIEF, BUREAU OF UTILITIES DATE
... 7/29/88

CHIEF, LAND DEVELOPMENT DIV. DATE
... 7/29/88

CLARK - FINEPROCK & SACKETT, INC.
ENGINEERS - PLANNERS - SURVEYORS

7135 MINSTREL WAY COLUMBIA MARYLAND 21045
(301) 381-7500 BALTO. (301) 621-8100 WASH.

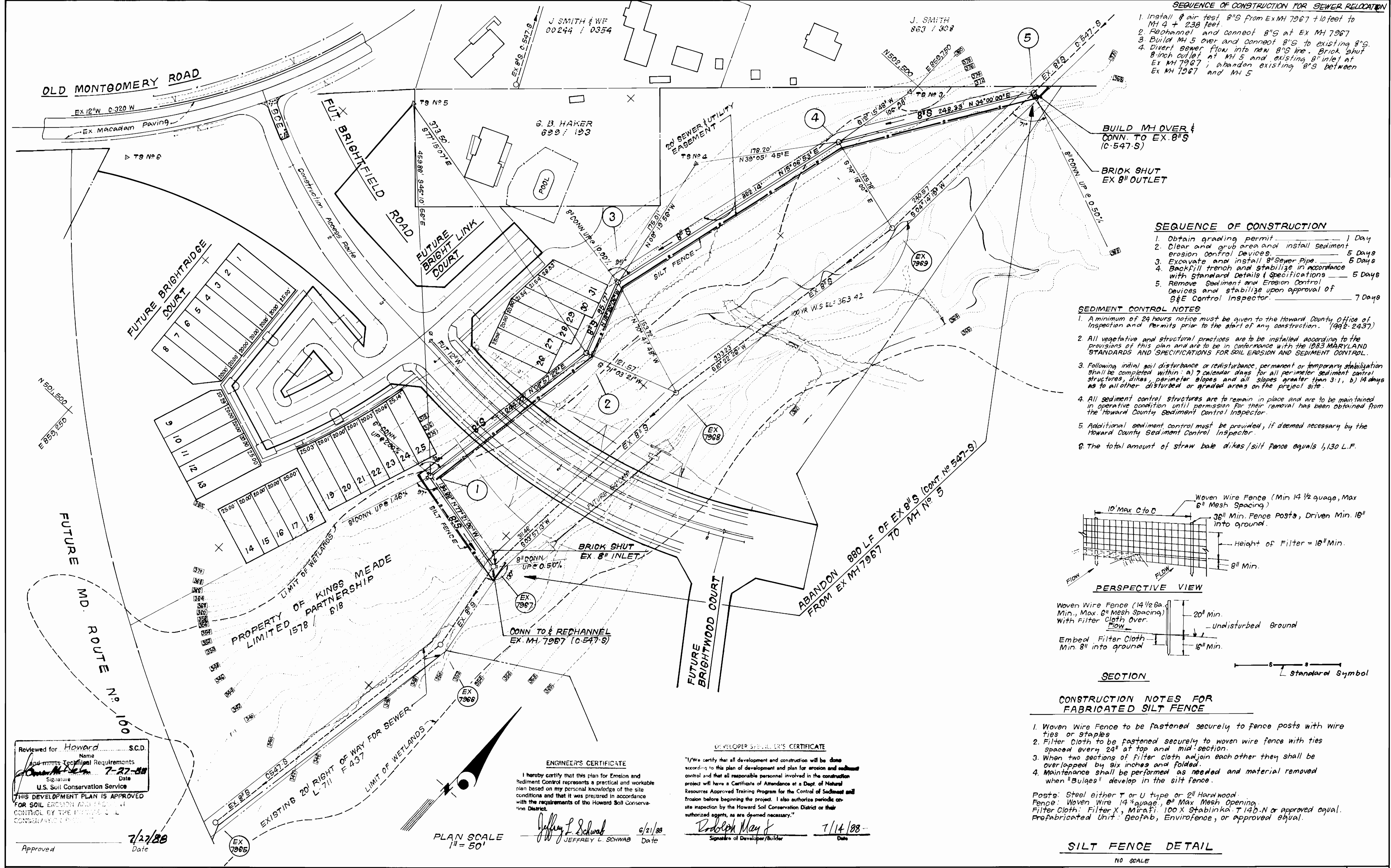
STATE OF MARYLAND
DEPARTMENT OF PUBLIC WORKS
PROFESSIONAL ENGINEER

DES: JTR			
DRN: JTR			
CHK: CCM			
DATE: JUN 88			
BY NO.		REVISION	DATE

TITLE SHEET	600' SCALE MAP NO. 37	BLOCK NO.
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BRIGHTFIELD SEWER RELOCATION
KINGS MEADE LIMITED PARTNERSHIP PROPERTY
1ST ELECTION DISTRICT
CONTRACT NO. 10-1838-D

SCALE AS SHOWN
SHEET 1 OF 3



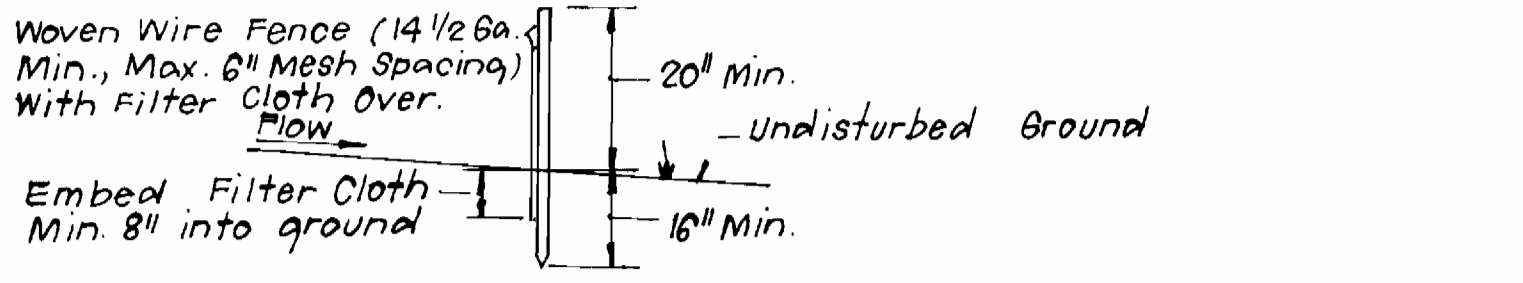
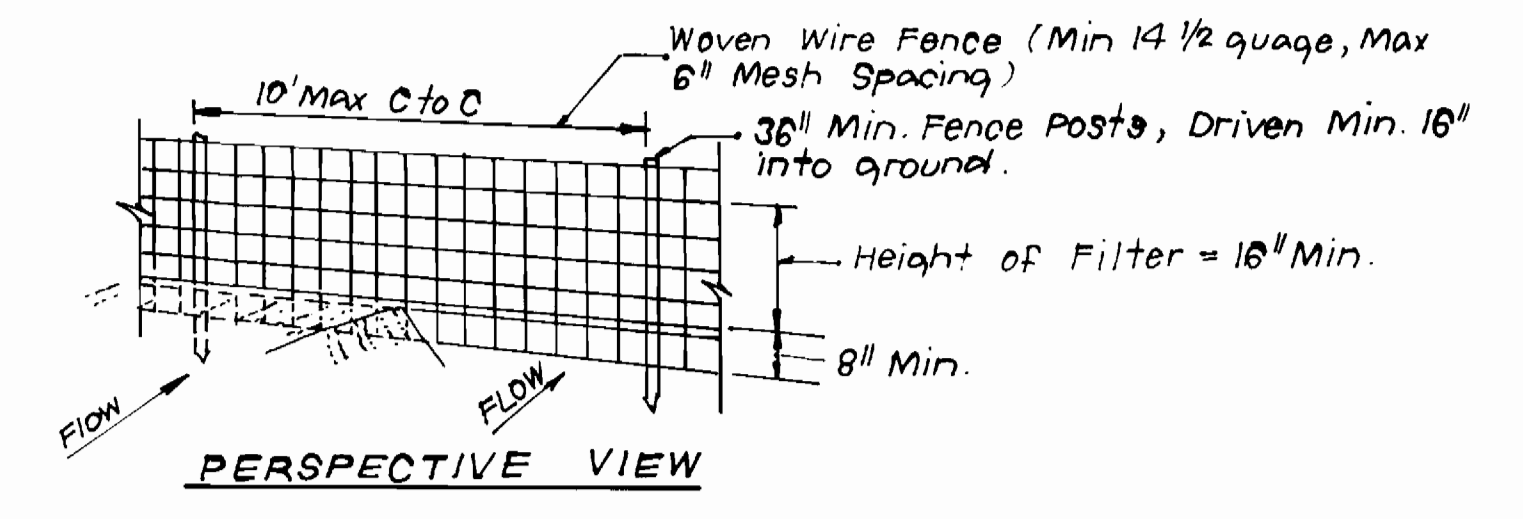
- SEQUENCE OF CONSTRUCTION FOR SEWER RELOCATION**
1. Install 8" air test 8" S from Ex MH 7967 + 10 feet to MH 4 + 238 feet.
 2. Rechannel and connect 8" S at Ex MH 7967
 3. Build MH 5 over and connect 8" S to existing 8" S.
 4. Divert sewer flow into new 8" S line. Brick shut 8-inch outlet at MH 5 and existing 8" inlet at Ex MH 7967; abandon existing 8" S between Ex MH 7967 and MH 5

BUILD MH OVER & CONN. TO EX. 8" S (C-547-S)

BRICK SHUT EX 8" OUTLET

- SEQUENCE OF CONSTRUCTION**
1. Obtain grading permit _____ 1 Day
 2. Clear and grub area and install sediment erosion control devices _____ 5 Days
 3. Excavate and install 8" Sewer Pipe _____ 5 Days
 4. Backfill trench and stabilize in accordance with Standard Details / Specifications _____ 5 Days
 5. Remove Sediment and Erosion Control Devices and stabilize upon approval of B&E Control Inspector _____ 7 Days

- SEDIMENT CONTROL NOTES**
1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1; b) 14 days as to all other disturbed or graded areas on the project site.
 4. All sediment 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.
 5. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
 6. The total amount of straw bale dikes/silt fence equals 1,130 L.F.



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Woven Wire Fence to be fastened securely to fence posts with wire ties or staples
2. Filter Cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid-section.
3. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
4. Maintenance shall be performed as needed and material removed when "Bulges" develop in the silt fence.

Posts: Steel either T or U type or 2" Hardwood
 Fence: Woven Wire 14 1/2 gauge, 6" Max. Mesh Opening.
 Filter Cloth: Filter X, Mirafl, 100 X Stablinka, T-14B-N or approved equal.
 Prefabricated Unit: Geofab, Envirofence, or approved equal.

SILT FENCE DETAIL
NO SCALE

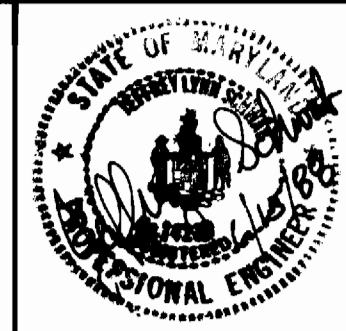
Reviewed for Howard S.C.D. Name
 and meets Technical Requirements
 Signature: *[Signature]* Date: 7-27-88
 U.S. Soil Conservation Service
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT
 Approved: *[Signature]* Date: 7/27/88

ENGINEER'S CERTIFICATE
 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.
 Signature: *[Signature]* Date: 6/21/88
 JEFFREY L. SCHWAB

DEVELOPER/OWNER'S CERTIFICATE
 "I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources 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 or their authorized agents, as are deemed necessary."
 Signature: *[Signature]* Date: 7/14/88
 Deborah May

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *[Signature]* Date: 7-25-88
 Chief, Bureau of Engineering: *[Signature]* Date: 7/25/88
 Chief, Bureau of Utilities: *[Signature]* Date: 7/25/88
 Chief, Land Development Div.: *[Signature]* Date: 7/25/88

CLARK - FINEROCK & SACKETT, INC.
 ENGINEERS - PLANNERS - SURVEYORS
 7135 MINSTREL WAY COLUMBIA MARYLAND 21045
 (301) 381-7500 BALTO. (301) 621-8100 WASH.



DES: JTR					
DRN: JTR					
CHK: CCM					
DATE: JUN 88	BY: NO.	REVISION	DATE	600'S SCALE MAP NO. 37	BLOCK NO.

PLAN OF SEWER RELOCATION

BRIGHTFIELD SEWER RELOCATION
 KINGS MEADE LIMITED PARTNERSHIP PROPERTY
 1ST ELECTION DISTRICT
 CONTRACT NO. 10-1838-D

SCALE AS SHOWN
 SHEET 2 OF 3

Reviewed for Howard S.C.D.
 Name
 and meets Technical Requirements
 Signature [Signature] Date 7/27/88
 U.S. Soil Conservation Service

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

ENGINEER'S CERTIFICATE

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 Conserva-
 tion District.

Jeffrey L. Schwab 6/21/88
 Signature Date
 JEFFREY L. SCHWAB

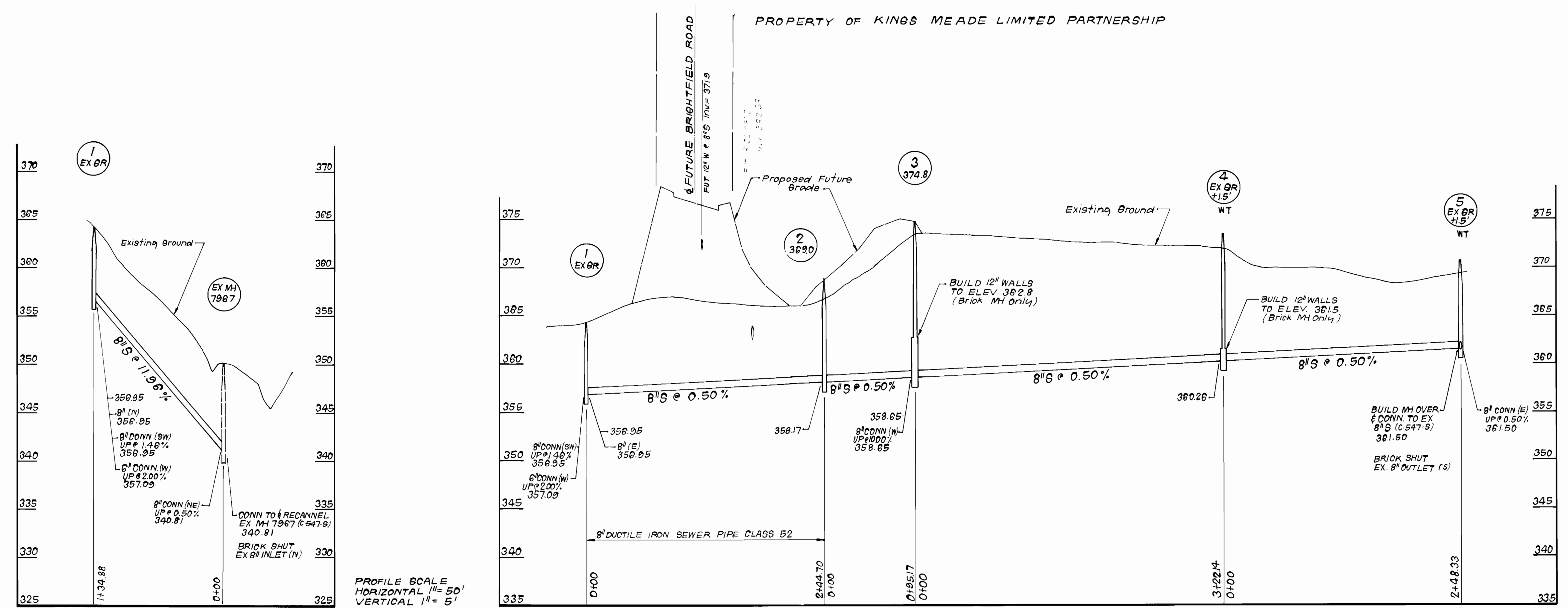
DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done
 according to this plan of development and plan for erosion and sediment
 control and that all responsible personnel involved in the construction
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 Resources 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 or their
 authorized agents, as are deemed necessary."

Rodolph Mayt 7/14/88
 Signature Date
 Signature of Developer/Builder

Approved _____ Date 7/27/88

PROPERTY OF KINGS MEADE LIMITED PARTNERSHIP



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 7/20/88
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 7-23-88
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 7/20/88
 CHIEF, LAND DEVELOPMENT DIV. DATE

[Signature] 7-25-88
 CHIEF, BUREAU OF UTILITIES DATE

CLARK, FINEFROCK & SACKETT, INC.
 ENGINEERS - PLANNERS - SURVEYORS

7135 MINSTREL WAY COLUMBIA MARYLAND 21045
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DES: JTR			
DRN: JTR			
CHK: COM			
DATE: JUN 88	BY	NO.	REVISION

PROFILE OF
 SEWER RELOCATION

600' SCALE MAP NO. _____ BLOCK NO. _____

BRIGHTFIELD SEWER RELOCATION
 KINGS MEADE LIMITED PARTNERSHIP PROPERTY
 1ST ELECTION DISTRICT
 CONTRACT NO. 10-1838-D

SCALE AS SHOWN

SHEET 3 OF 3