QUANTITIES									
	QUANTITIES	AS-BUILT							
ITEM	ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER					
8" SEWER MAIN	2,051 L.F.								
4" SEWER LINE	5 L.F.			,					
SEWER MAN HOLE	7 EACH			·					
8" SEWER PLUG	1 EACH								
4" SEWER PLUG	1 EACH								
12"x 12" TS&V	1 EACH			ŧ					
12" WATER MAIN	2,032 L.F.			,					
12" 1/8 BEND	3 EACH								
12"x 6" TEE	4 EACH								
12"x 4" TEE	2 EACH								
12"x 2" TEE	1 EACH								
FIRE HYDRANT	4 EACH								
12" WATER PLUG	1 EACH								
4" VALVE	2 EACH								
2" VALVE	1 EACH								
6" VALVE	4 EACH								
NAME OF UTILITY CONTRACTOR									
SURVEY AND DRAFTING DIVISION AS-BUILT DATE.									

# <u>BENCHMARKS</u>

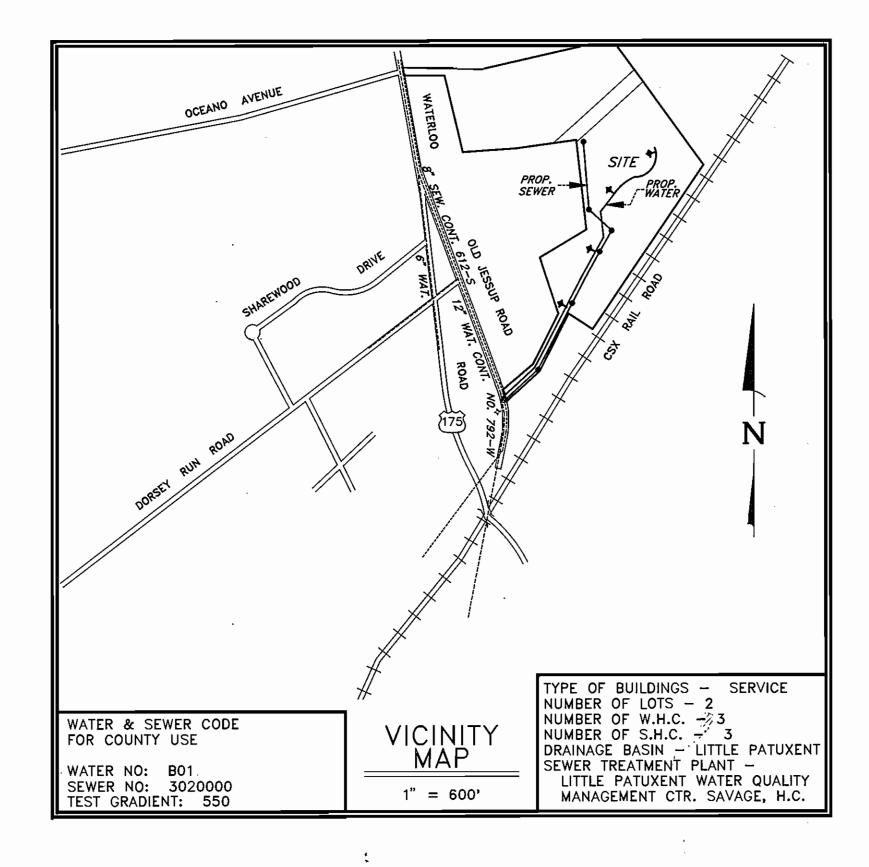
RAILROAD SPIKE IN IS" DIAMETER SHEET GOM TREE TIOFEET WEST OF OLD FOULDATION ELEV. = 203.85

RAILROAD SPIKE IN 16' DIAMETER MARKE TREE ON EAST SIDE OF DRAINAGE SWALE ECEV. = 205.56°

RAILROAD SPIKE IN 23" DIAMETER MARKE TREE ON THE SOUTH WEST CORNER OF GRAVEL DRIVE WAY INTERSECTION EAST OF STREAM

ELEV. = 186.33'

RAILROAD SPIKE IN B.G. & E POLE #307198 SOUTH OF OLD JESSUP ROAD, WEST OF A DRIVEWAY ECEV. = 192.39



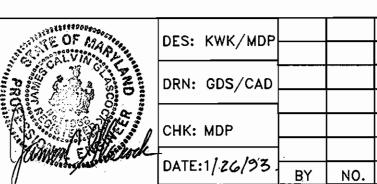
JESSUP PARK

# CONTRACT NO. 24-3223-D WATER AND SEWER PLANS

HOWARD SOIL CONSERVATION DISTRICT: REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS F-92-104

> DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

MACRIS, HENDRICKS & GLASCOCK, P.A. ENGINEERS PLANNERS SURVEYORS 9220 WIGHTMAN ROAD, SUITE 120 GAITHERSBURG, MARYLAND 20879 PHONE 1-301-670-0840



DES: KWK/MDP DRN: GDS/CAD

REVISIONS

TITLE SHEET WATER & SEWER MAINS

BLOCK NO. 21

DATE 600 SCALE MAP NO. 43

JESSUP PARK PARCEL "B"

1ST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

GENERAL NOTES

5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR

6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION

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

8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE

BALTIMORE GAS & ELECTRIC CO. CONTRACTOR SERVICES.....410-859-9004 BUREAU OF UTILITIES, HOWARD CO. D.P.W......410-313-4900

9. 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

10. CONTRACTOR SHALL REMOVE TREES, STUMPS, AND ROOTS ALONG LINE OF EXCAVATION AS

11. PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH

13. TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE

16. BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS ON THE

COMPACTED IN ACCORDANCE WITH SECTIONS 1000 AND 1005 OF THE GENERAL

18. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING

19. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPEC. C-153 DUCTILE

17. ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING.

IRON COMPACT FITTINGS 3"-12" FOR WATER AND OTHER LIQUIDS.

21. ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., OR P.V.C. UNLESS OTHERWISE

23. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.

24. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.

26. HOUSE (S) WITH SYMBOL "C.N.S." INDICATES CELLAR CANNOT BE SERVED.

29. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN

30. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO

31. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY. AT

410-313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT BORING OR JACKING OPERATION IN ANY COUNTY ROAD FOR LAYING WATER, SEWER OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS

22. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF

25. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND

27. ALL WATER HOUSE CONNECTIONS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 12"

28. ALL SANITARY SEWER HOUSE CONNECTIONS SHALL HAVE A MINIMUM VERTICAL CLEARANCE

COVERS, PER H.C. STANDARD DETAIL G5.52 VOLUME IV. WHERE WATERTIGHT MANHOLE IS

20. THE SERVICE CLAMPS ARE TO HAVE STAINLESS STEEL STRAPS.

USED SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE.

ABOVE ALL SANITARY SEWER CROSSINGS.

OF 12" BELOW ALL WATER MAIN CROSSINGS.

DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AS PER STANDARD DETAILS

THE SOIL AROUND THE FIRE HYDRANTS SHALL BE

DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE

MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY

WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.

12. ALL WATER MAINS TO BE CLASS 52 D.I.P. UNLESS OTHERWISE NOTED.

UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION

..1-800-257-7777

....1-800-876-4742

METHODS, USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV

THE SATISFACTION OF THE ENGINEER 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.C. DATA.

4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.

OPERATIONS AT THE CONTRACTOR'S EXPENSE.

UNIT PRICE BID FOR EXCAVATION AND BACKFILL.

14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.

STATE HIGHWAY ADMINISTRATION.....

AT THE JOBSITE.

MISS UTILITY.....

CONTRACTOR.

MAINTENANCE OPERATIONS.

15. BLOCK ALL FITTINGS WITH CONCRETE.

EXTERIOR MANHOLE WALL.

REQUIREMENTS FOR WATER AND SEWER.

UTILITY COMPANY TO SCHEDULE THE BRACING OF POLES.

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

TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANY AND HAS MADE

ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES ADDITIONAL BRACING OF POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE

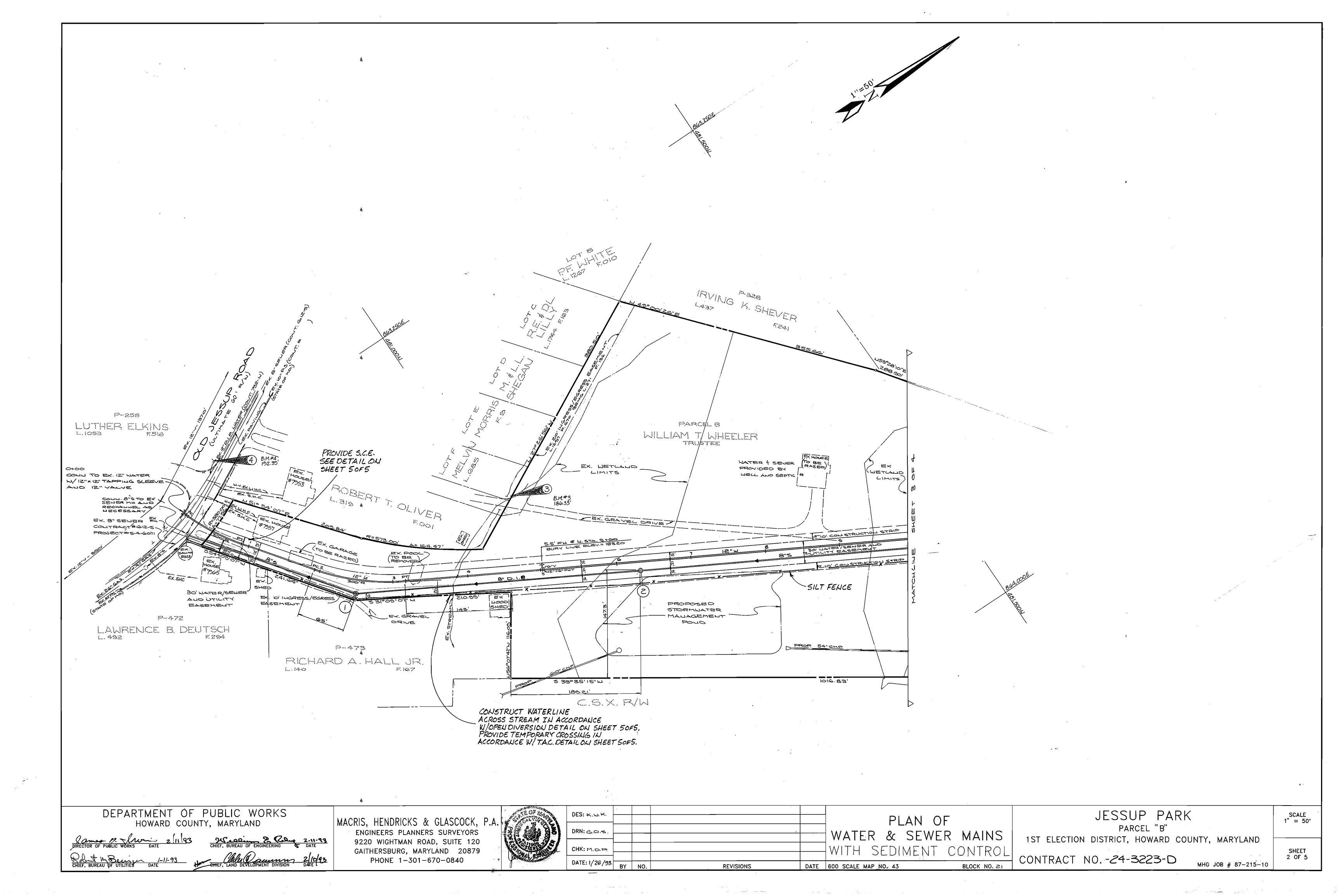
CONTRACT NO. 24-3223-D

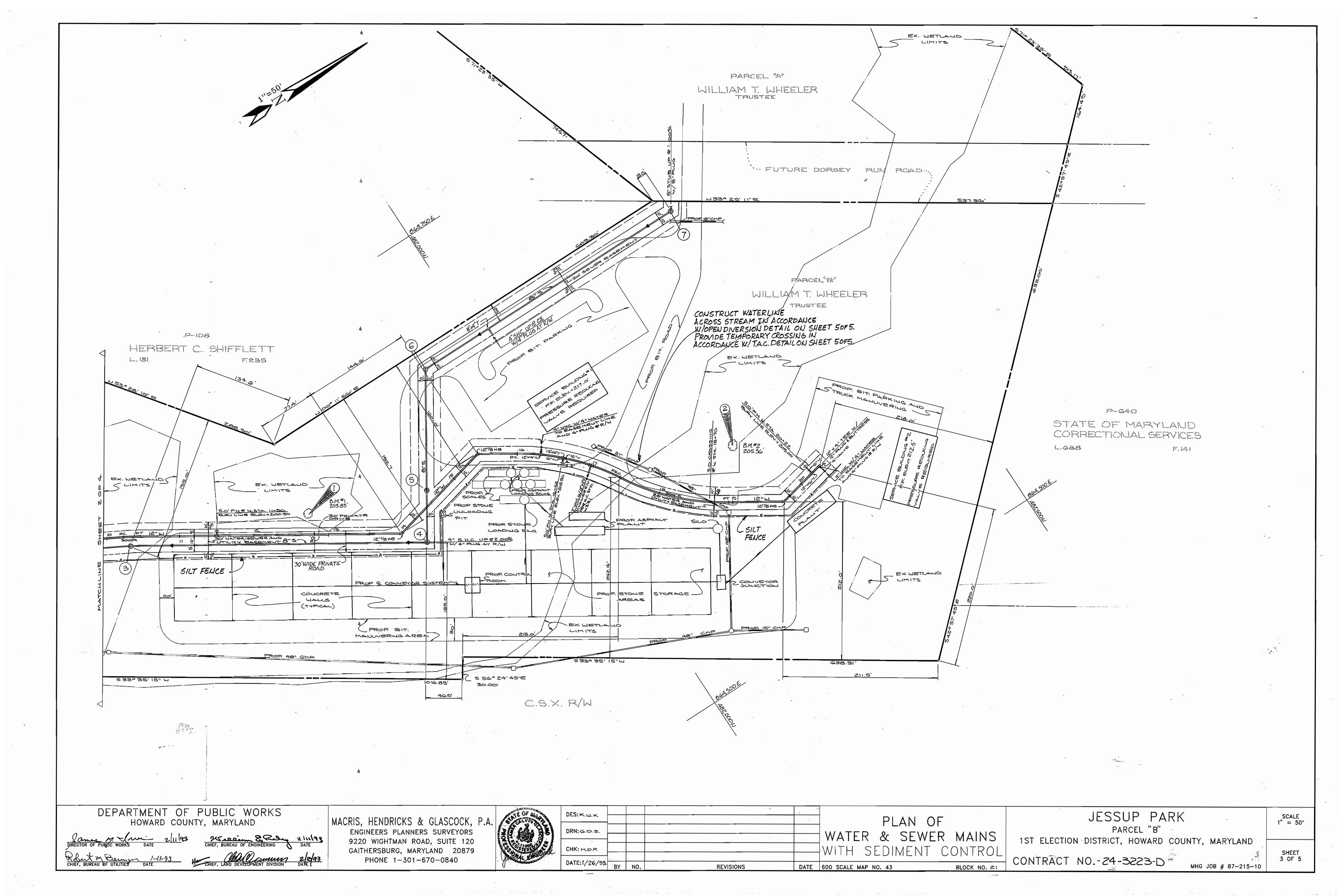
PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

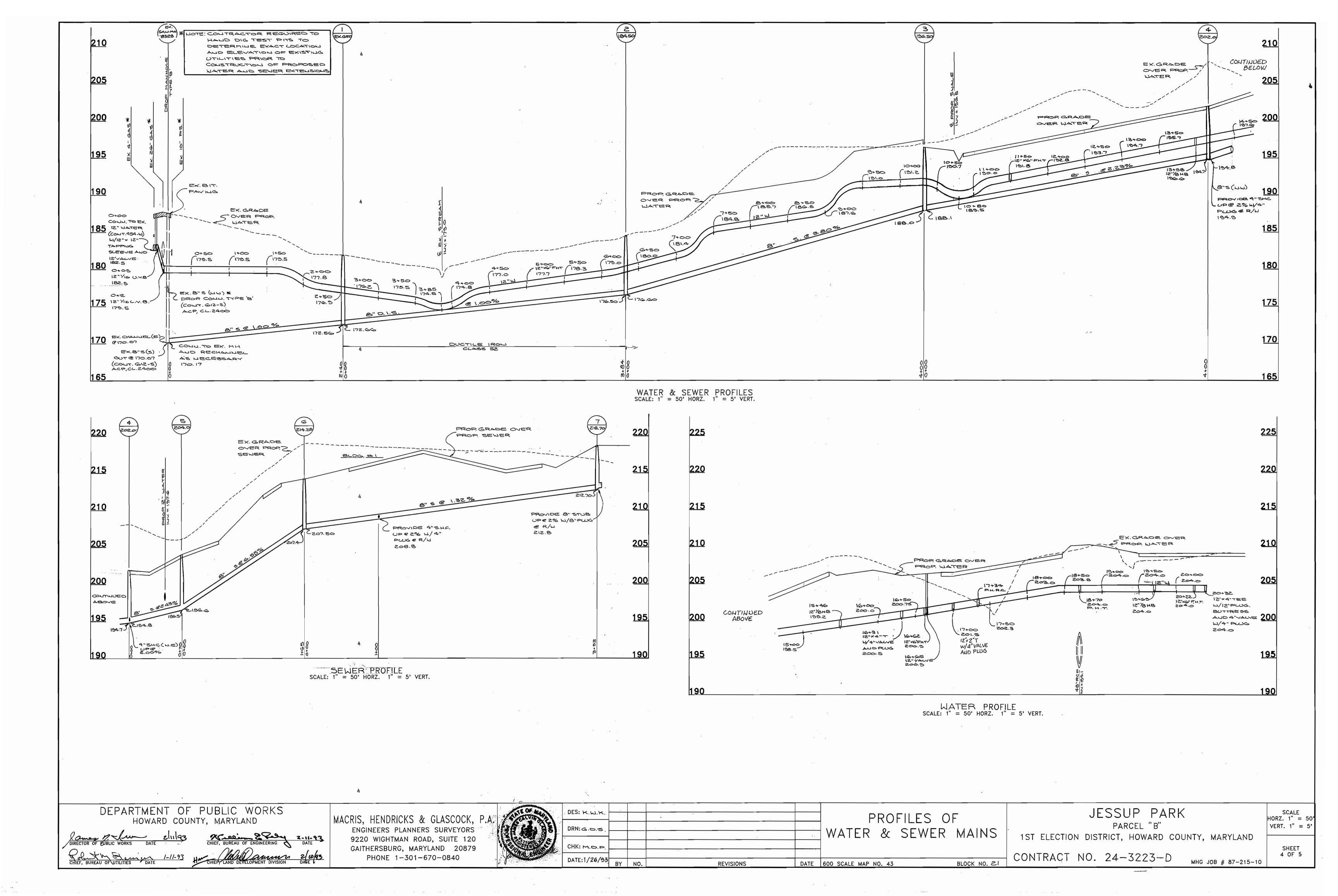
SCALE SHOWN

MHG JOB # 87-215-10

SHEET 1 OF 5







#### 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

- 1) Preferred -- Apply 2 tons per acres dolomitic limestone (92 lbs/1000 square 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 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft) before seeding. Harrow of 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 lbs per acre (.05 1bs/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 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Maintenance -- Inspect all seeded areas and make needed repairs, replacements and

### 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 60 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 February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 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 (8 gal/1000 sq ft) for anchoring.

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

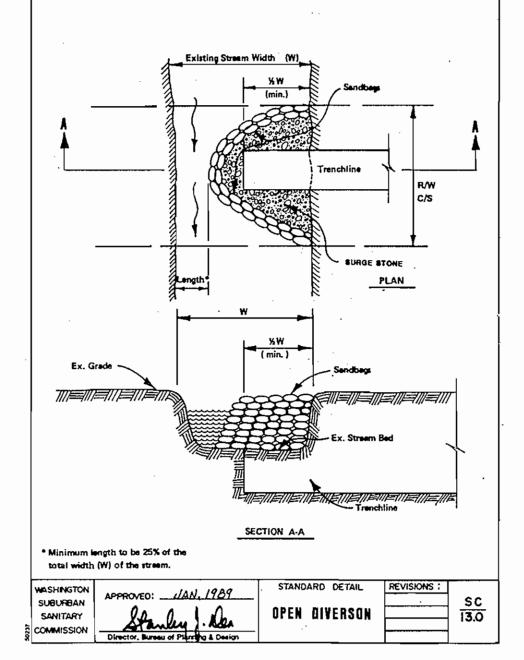
#### STANDARD SEDIMENT CONTROL NOTES

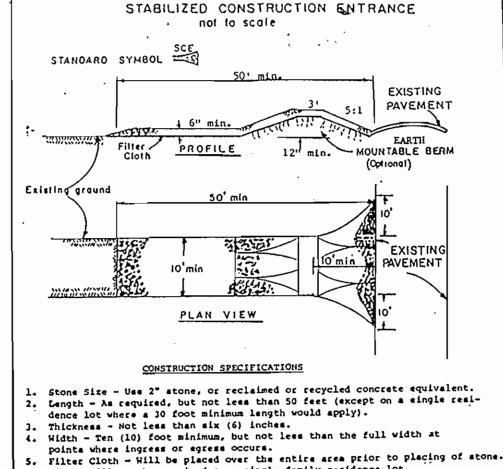
- 1) A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction,
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to 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.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 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
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

7) Site Analysis: Total Area of Site Area Disturbed Acres Area to be roofed or paved Area to be vegetatively stabilized 1.500 Cu. Yds. Total Cut 1,500 Cu. Yds. Total Fill

Offsite waste/borrow area location

- 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.
- 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.



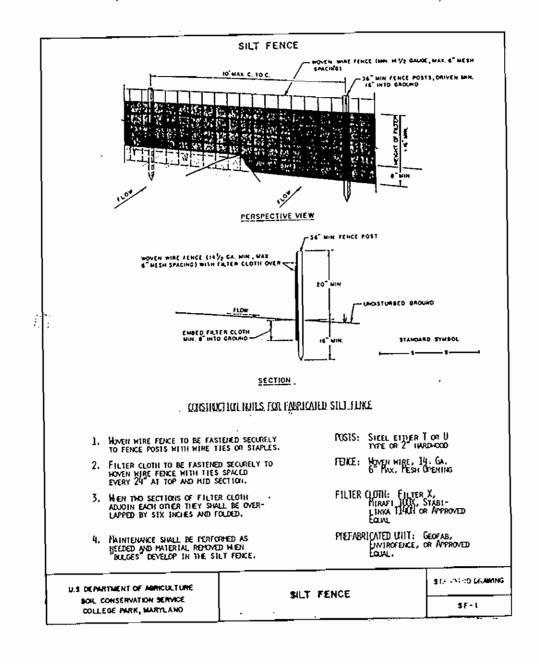


Filter will not be required on a single family residence lot. Surface Water - All surface water flowing or diverted toward construction entrances shell be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.

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 apilled, dropped, washed or tracked onto public rights-of-way must be removed immediately. Washing - Wheals shall be classed to remove sediment prior to entranca onto public rights-of-way. When washing is required, it shall be done on an area

stabilized with atons and which drains into an approved sediment trapping Periodic inspection and needed maintanance shall be provided after each rain.

STABILIZED CONSTRUCTION Standard SOIL CONSERVATION

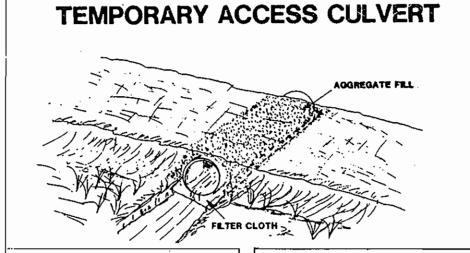


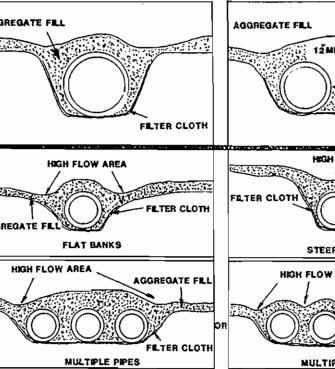
## SEQUENCE OF CONSTRUCTION

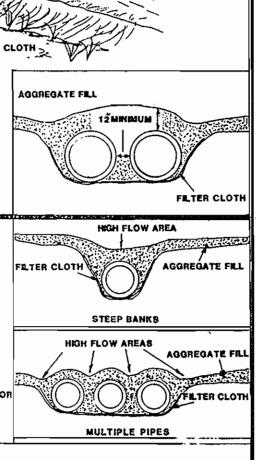
OBTAIN A GRADING PERMIT.

DATE 600 SCALE MAP NO. 43

- CONSTRUCT SILT FENCE ALONG THE DOWN HILL SIDE OF THE AREA TO BE DISTURBED.
- CONSTRUCT WATER & SEWER FROM THE PUBLIC CONNECTIONS TO 50' INTO THE SITE.
- CONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE, MAINTAIN SILT FENCE.
- CONSTRUCT REMAINING WATER AND SEWER, PROVIDING STREAM CROSSINGS AS NECESSARY.
- WHEN THE DISTURBED AREA IS STABILIZED AND UPON RECEIVING PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE STABILIZATION NOTES.







STANDARD DRAWING

Temporary Access Culvert - (STANDARD DRAWING TAC-1)

**WATER RESOURCES** 

ADMINISTRATION

A temporary access culvert is a structure consisting of a section(s) of circular pipe, pipe arches, or oval pipes of reinforced concrete, corrugated metal, or structural plate, which is used to convey flowing water through the crossing.

TEMPORARY ACCESS CULVERT

#### Considerations

- a. Temporary culverts are used where (1) the channel is too wide for normal bridge construction, (2) anticipated loading may prove unsafe for single span bridges, or (3) access is not needed from
- b. This temporary waterway crossing method is normally preferred over a ford type of crossing, since disturbance to the waterway is only during construction and removal of the culvert.
- c. Temporary culverts can be salvaged and reused.

## Construction Specifications

- a. Restrictions No Construction or removal of a temporary access ulvert will be permitted between October 1 through April 30 for all Glass III and Class IV Trout Waters or between March 15 through June 15 for non-trout waterways.
- Culvert Strength All culverts shall be strong enough to support their cross sectional area under maximum expected loads
- Culvert Size The size of the culvert pipe shall be the largest pipe diameter that will fit into the existing channel without major excavation of the waterway channel or without major approach fills. If a channel width exceeds 3 feet, additional pipes may be used until the cross sectional area of the pipes is greater than 60 percent of the cross sectional area of the existing channel. The minimum size culvert that may be used is a 12" diameter pipe.
- Culvert Length The culvert(s) shall extend a minimum of one foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in
- e. Filter Cloth Filter cloth shall be placed on the streambed and streambanks prior to placement of the pipe culvert(s) and aggregate. The filter cloth shall cover the streambed and extend a minimum six inches and a maximum one foot beyond the end of the culvert and bedding material. Filter cloth reduces settlement and improves crossing stability.
- f. Culvert Placement The invert elevation of the culvert shall be installed on the natural streambed grade to minimize interference with fish migration (free passage of fish).
- g. Culvert Protection The culvert(s) shall be covered with a minimum of one foot of aggregate. If multiple culverts are used they shall be separated by at least 12" of compacted aggregate fill. At a minimum, the bedding and fill material used in the construction of the temporary access culvert crossings shall conform with the aggregate requirements cited in Section I.H. 1. above.
- h. <u>Stabilization</u> All areas disturbed during culvert installation shall be stabilized within 14 calendar days of the disturbance in accordance with the Standard for "Critical Area Stabilization With Permanent Seeding."

## Culvert Maintenance Requirements

- Inspection Periodic inspection shall be performed to ensure that he culverts, streambed, and streambanks are not damaged, and that sediment is not entering the stream or blocking fish passage or
- Maintenance Maintenance shall be performed, as needed in a timely menner to ensure that structures are in compliance with this standard and specification. This shall include removal and disposal of any trapped sediment or debris. Sediment shall be disposed of and stabilized outside the waterway flood plain.

## Culvert Removal and Clean-Up Requirements

- Removal When the crossing has served its purpose, all structures including culverts, bedding and filter cloth materials shall be removed within 14 calendar days. In all cases, the culvert materials shall be removed within one year of installation. No structure shall be removed during the spswning season (March 15 through June 15).
- Final Clean-up Final clean-up shall consist of removal of the emporary structure from the waterway, removal of all construction materials, restoration of original stream channel cross section, and protection of the stream banks from erosion. Removed material shall be stored outside of the waterway flood plain.
- Method Removal of the structure and clean up of the ares shall be accomplished without construction equipment working in the waterway channel.
- Final Stabilization All areas disturbed during culvert removal shall be stabilized within 14 calendar days of the disturbance in accordance with the Standard for "Critical Area Stabilization With Permanent Seeding."

PARCEL "B"

1" = 50'

SHEET

5 OF 5

1ST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

MHG JOB # 87-215-10

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

MACRIS, HENDRICKS & GLASCOCK, P.A. ENGINEERS PLANNERS SURVEYORS 9220 WIGHTMAN ROAD, SUITE 120 GAITHERSBURG, MARYLAND 20879 PHONE 1-301-670-0840



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	CHK: MDP				
	DATE: 1/26/93				
		BY	· NO.	REVISIONS	
				<u> </u>	

SOIL EROSION & SEDIMENT CONTROL DETAILS AND NOTES

CONTRACT NO. 24-3223-D BLOCK NO. 21