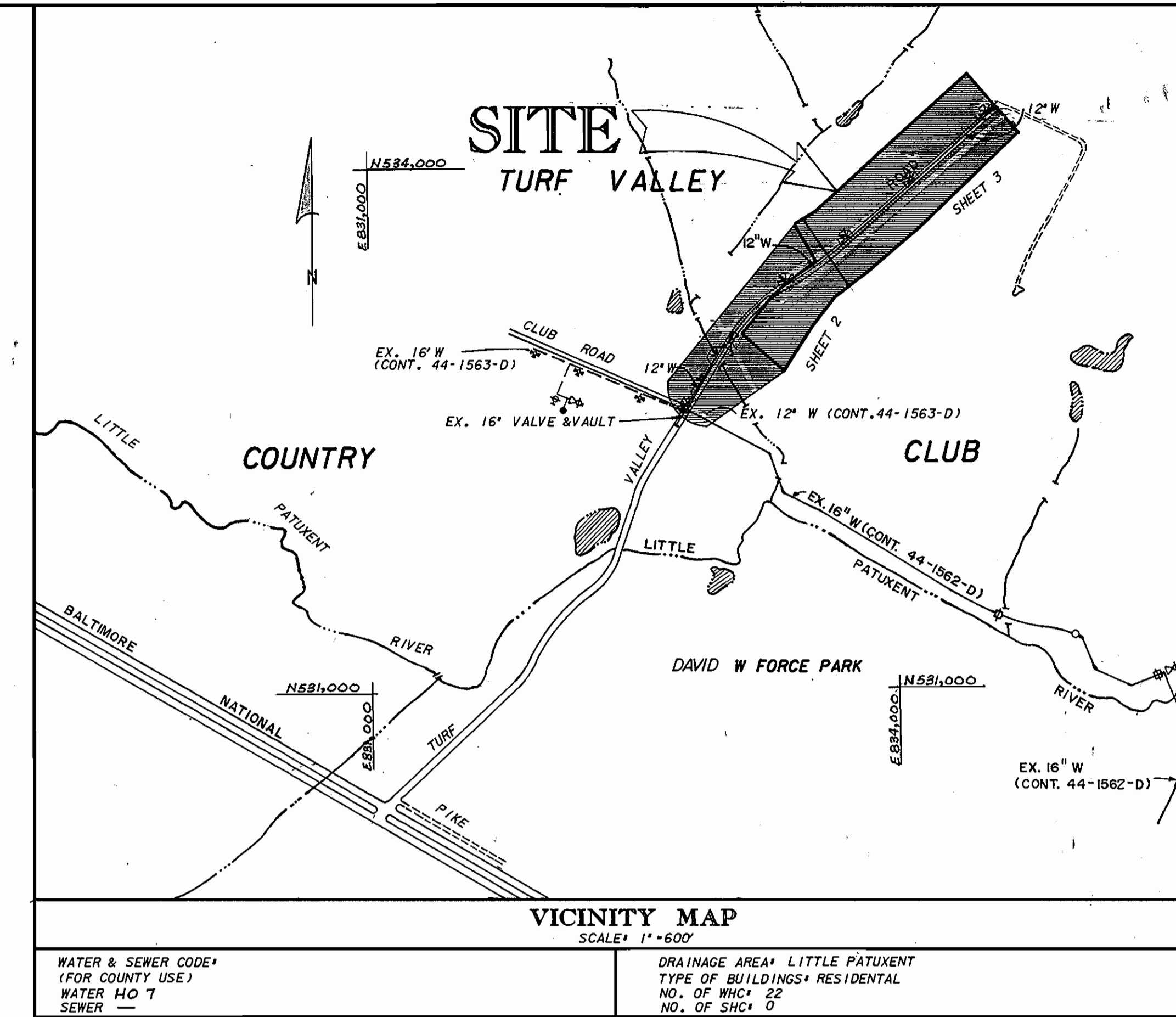


QUANTITIES			
ITEM	BID	AS-BUILT	MATERIAL / SUPPLIER
12" D.I.P. WATER	LF	2980	
5.0" FIRE HYDRANT	EA.	3	
4.5" FIRE HYDRANT	EA.	1	
6.5" FIRE HYDRANT	EA.	2	
12" X 6" T	EA.	6	
6" VALVE	EA.	6	
12" - 1/8 BEND	EA.	6	
12" PLUG	EA.	3	
AIR RELEASE M.H.	EA.	1	
12" VALVE	EA.	3	
BLOW OFF	EA.	1	
6" D.I.P.	LF	80	
1" W.H.C.	LF	250	
1 1/2" W.H.C.	LF	80	
18" D.I.R. SEWER	LF	32	



# TURF VALLEY ROAD WATER MAIN

## HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS CONTRACT NO. 44-1949 CAPITAL PROJECT W-8166

VICINITY MAP SCALE: 1" = 600'	
WATER & SEWER CODES (FOR COUNTY USE) WATER HO 7 SEWER —	DRAINAGE AREA: LITTLE PATUXENT TYPE OF BUILDINGS: RESIDENTIAL NO. OF WHC: 22 NO. OF SHC: 0

### 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 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.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.
6. 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. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 

STATE HIGHWAY ADMINISTRATION	531-5533	CONTRACTOR SERVICE	850-4620
BALTIMORE GAS & ELECTRIC CO.		UNDERGROUND DAMAGE CONTROL	859-9004
BALTIMORE GAS & ELECTRIC CO.		TROUBLE SHOOTING	298-9001
MISS UTILITY	1-800-257-7777		
COLONIAL PIPELINE CO.	795-1390		
BUREAU OF UTILITIES,	992-2366		
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION.
11. ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
12. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
13. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
14. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
15. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000.03.19 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
17. ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING, UNLESS OTHERWISE NOTED.
18. EXTEND PIPE AS NECESSARY TO INSTALL PLUG FOR BLOCKING, WHERE WATER MAINS END WITH VALVES.
19. ORIGINAL GROUND OVER WATER AND SEWER WAS TAKEN APRIL 1989.
20. STRAW BALE DIKES AND SILT FENCES ARE INTERCHANGEABLE.
21. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATION C-153, DUCTILE IRON COMPACT FITTINGS, 3 INCH THROUGH 12 INCH FOR WATER AND OTHER LIQUIDS.
22. ALL SERVICE CLAMPS ARE TO HAVE STAINLESS STEEL STRAPS.
23. ALL HOUSE CONNECTIONS SHALL BE OPEN CUT.
24. THE CONTRACTOR SHALL CONTACT MR. LOUIS MANGIONE, MANGIONE ENTERPRISES (301-825-8400) TO ARRANGE A MEETING TO DISCUSS THE REMOVAL AND REPLACEMENT OF TREES LOCATED WITHIN THE RIGHT-OF-WAY THRU TURF VALLEY COUNTRY CLUB.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
*James M. Helms* 11/8/89  
 S.S. SOIL CONSERVATION SERVICE

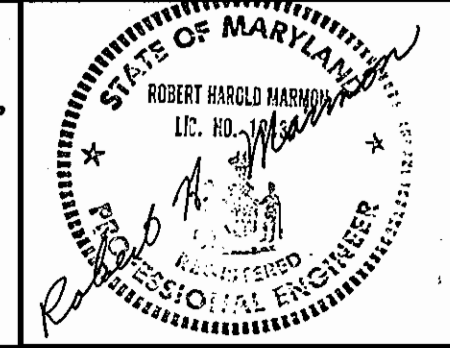
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*John R. Robertson* 11/8/89  
 HOWARD S.C.D.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION, AND SITE PLANS

BEFORE BEGINNING CONSTRUCTION, CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
*Robert W. Bennett* 11-7-89  
 CHIEF, BUREAU OF UTILITIES

GREENHORNE & O'MARA, INC.  
 113 WEST ROAD, SUITE 208  
 BALTIMORE, MD. 21204  
 PHONE (301) 296-4100



DES: D.T.W.	
DRN: D.T.W.	
CHK: R.H.M.	
DATE: 5/10/89	
BY: KRS	NO. 1
ADD NOTE 24, REV. QUANTITIES	
DATE: 5/10/89	

PLAN FOR WATER MAIN  
EXTENSION

600' SCALE MAP NO. 16 BLOCK NO. 12, 17, 18

TURF VALLEY ROAD WATER MAIN  
CAPITAL PROJECT NOW-8166  
CONTRACT NO. 44-1949  
SECOND ELECTION DISTRICT  
HOWARD CO., MARYLAND

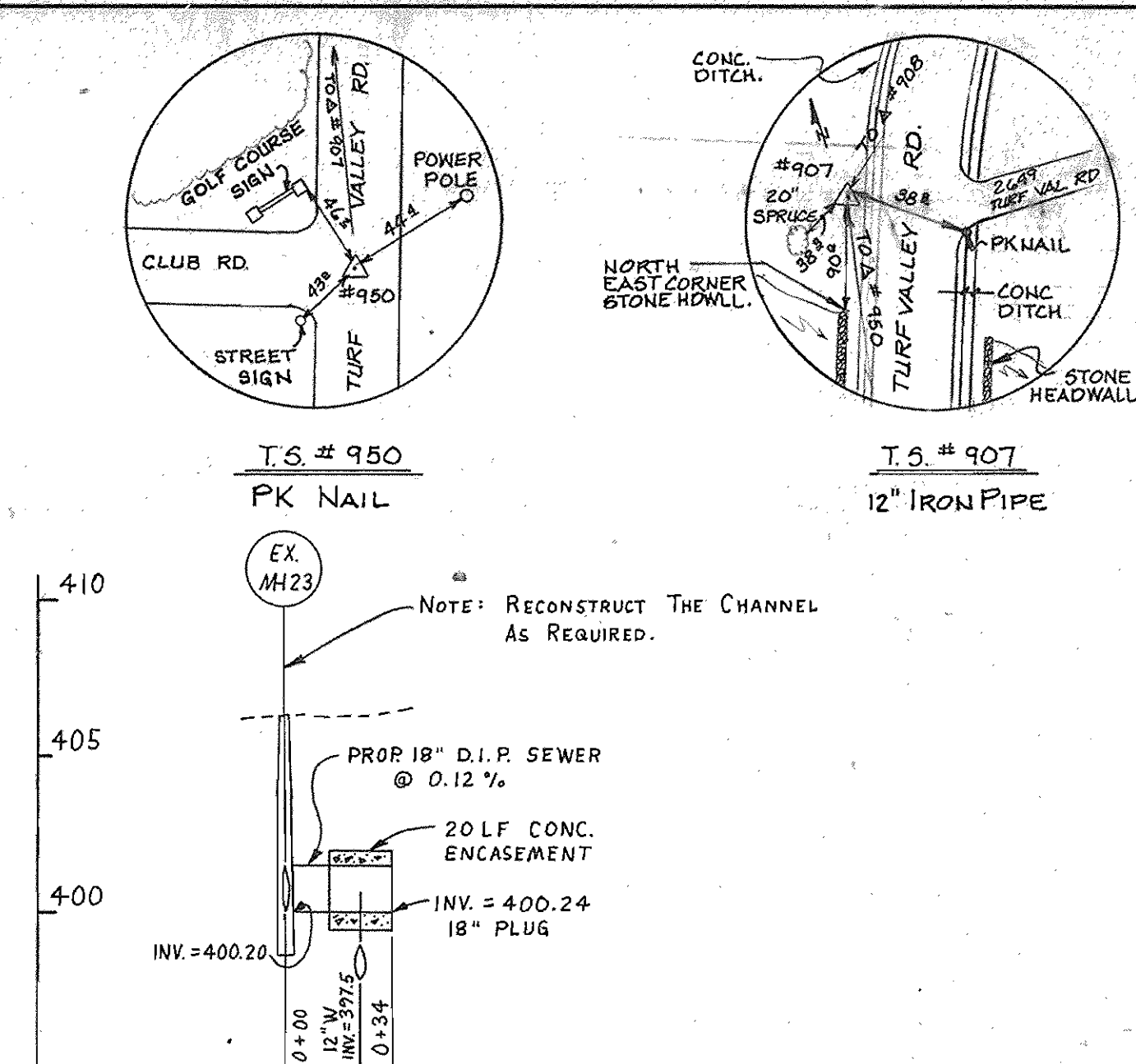
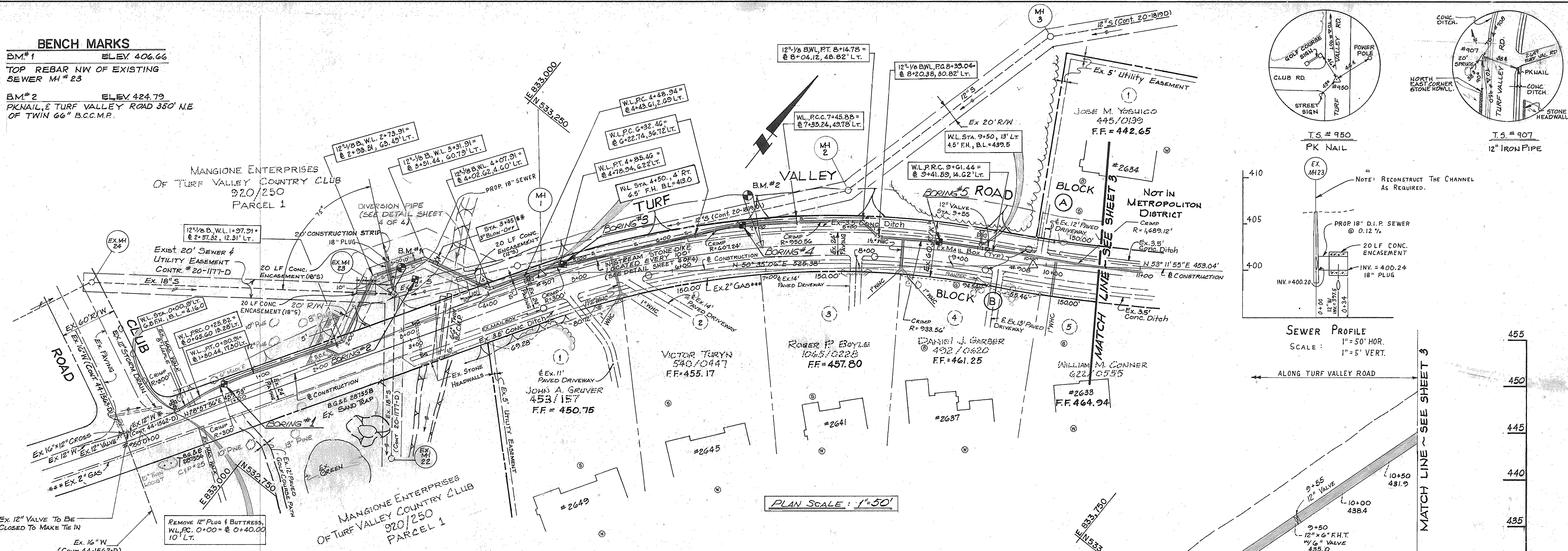
SCALE AS SHOWN  
SHEET 17 OF 17



**BENCH MARKS**

BM.#1 ELEV. 406.66  
 TOP REBAR NW OF EXISTING  
 SEWER MH #23

BM.#2 ELEV. 424.79  
 PKNAIL, E TURF VALLEY ROAD 350' NE  
 OF TWIN 66" B.C.C.M.P.



**Notes:**

- \* CONTRACTOR IS TO EXCAVATE FOR LOCATION & DEPTH OF EX. MAIN BEFORE LAYING ANY PIPE.
- \*\* AS PER STANDARD DETAIL W 4.13
- \*\*\* CONTRACTOR WILL DETERMINE THE LOCATION AND DEPTH OF ANY EXISTING MAINS BEFORE LAYING ANY PIPE.

**LEGEND:**

- ⊙ = WELL
- ⊕ = SEPTIC
- ⊗ = GAS SHUTOFF
- ⊠ = SOIL BORING

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
 James M. Helm / JMH 4/8/89  
 S.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 John L. Pelton / JLP 4/8/89  
 HOWARD S.C.D.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION, AND SITE PLANS

BEFORE BEGINNING CONSTRUCTION, CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION

**CAUTION TO CONTRACTOR:**  
 AVAILABLE RECORDS INDICATE THE PRESENCE OF A 2" GAS PARALLEL TO THE SOUTH RIGHT-OF-WAY OF TURF VALLEY ROAD. EXERCISE EXTREME CAUTION WHEN EXCAVATING IN THIS AREA.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

James M. Helm / JMH 4/8/89  
 DIRECTOR OF PUBLIC WORKS DATE

John L. Pelton / JLP 4/8/89  
 CHIEF, BUREAU OF UTILITIES DATE

Chief, Bureau of Engineering DATE

Chief, Utility Design Division DATE

ENGINEERS - ARCHITECTS - PLANNERS - SCIENTISTS - SURVEYORS - PHOTOGRAMMETRISTS  
**GREENHORNE & O'MARA, INC.**  
 113 WEST ROAD, SUITE 208  
 BALTIMORE, MARYLAND 21204

(301) 296-4100

STATE OF MARYLAND  
 REGISTERED PROFESSIONAL ENGINEERS

DES: D.T.W	
DRN: D.T.W	
CHK: R.H.M	
DATE: 5/10/89	
BY: NO.	
REVISIONS	
DATE	

KRS 2 ADDED SAN. SEWER PLAN & PROFILE 8-24-89  
 JLP 1 ADDED SOIL BORING LOCATIONS 4/1/89

**12" WATER MAIN  
 PLAN AND PROFILE**

600' SCALE MAP NO. 16  
 BLOCK NO. 12, 17, 18

**TURF VALLEY ROAD WATER MAIN**  
 CAPITAL PROJECT NO. W-8166  
 CONTRACT NO. 44-1949  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

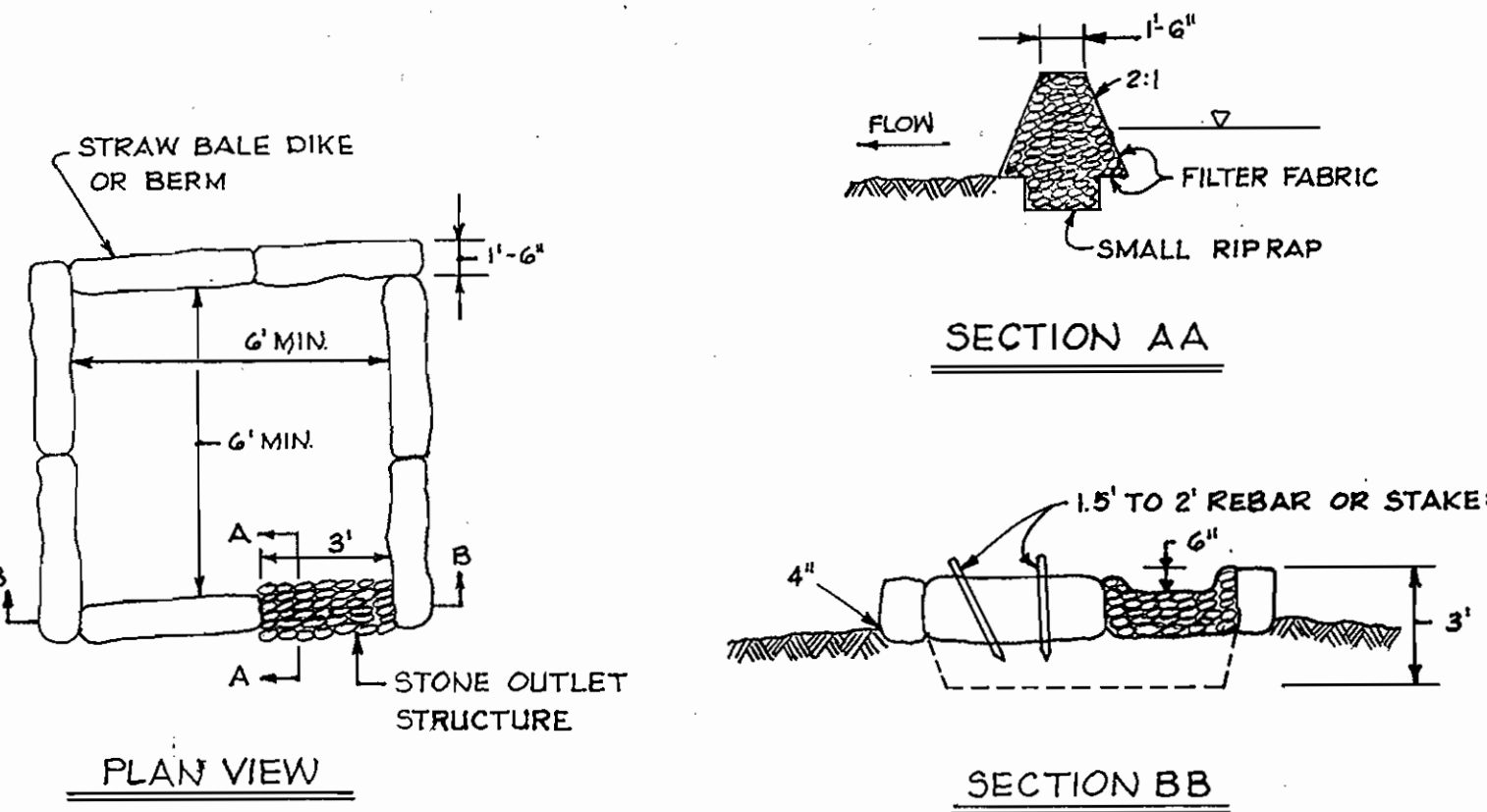
SCALE AS SHOWN  
 SHEET 2 OF 4







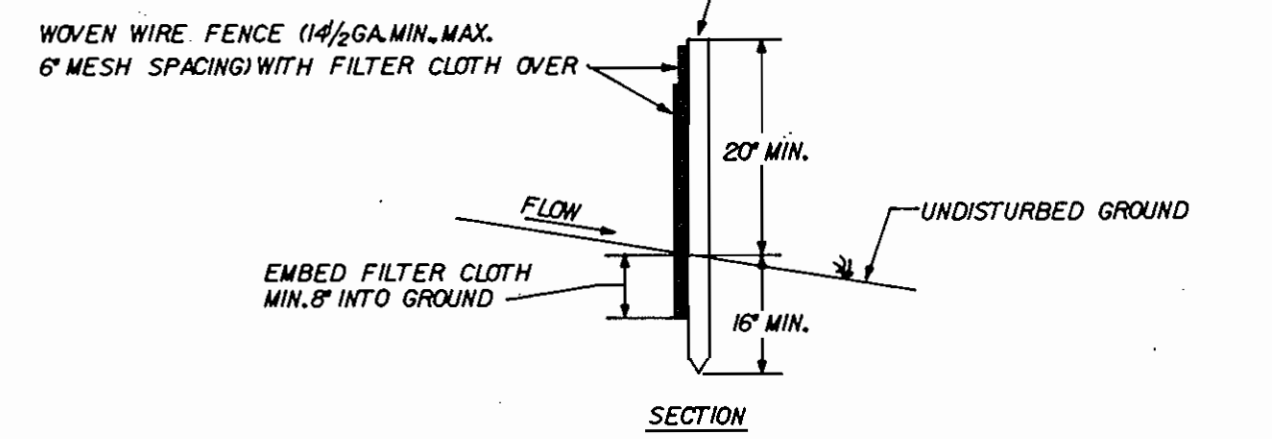
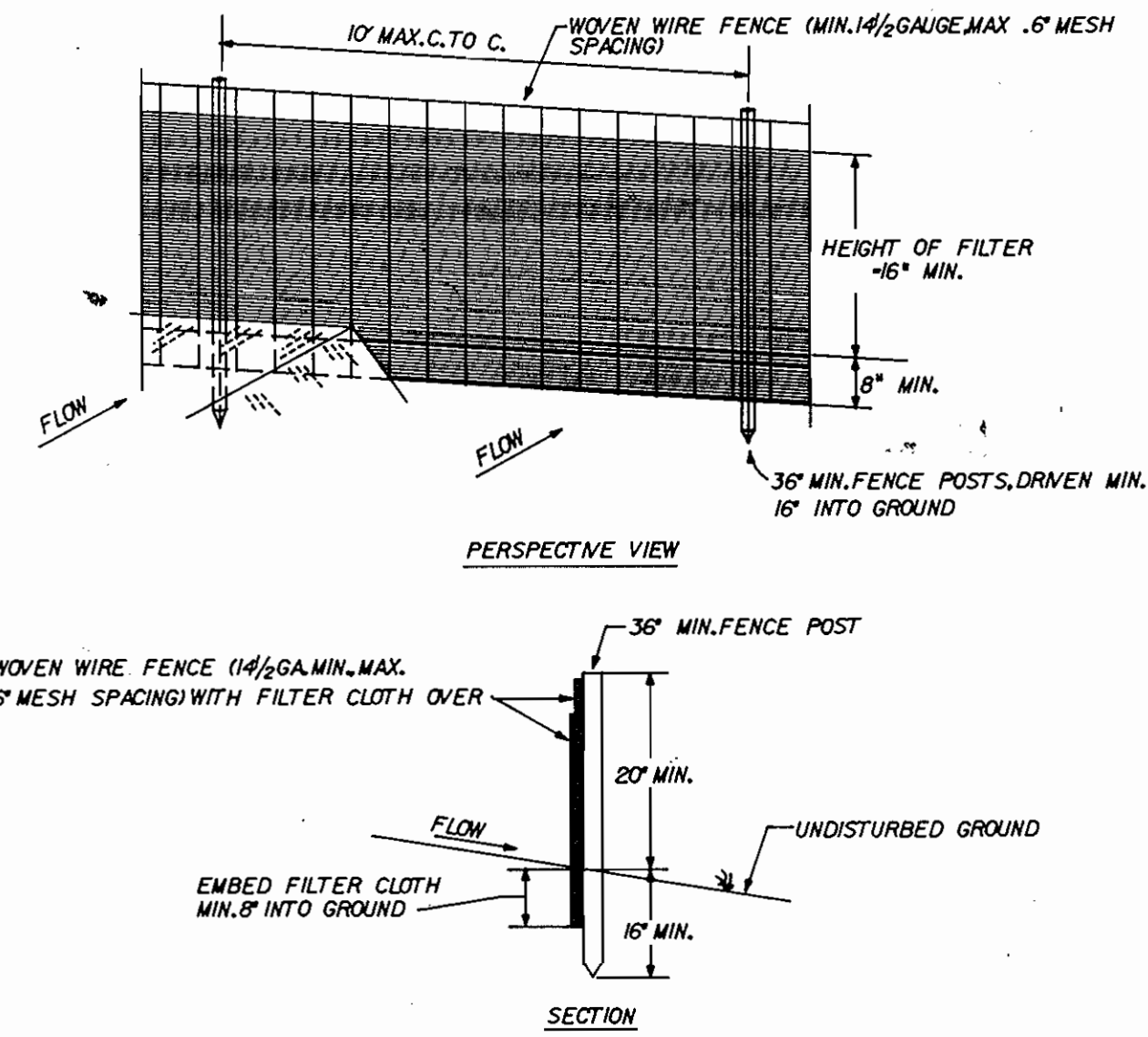
**DEWATERING BASIN**  
NOT TO SCALE



- I. Description**  
The work shall consist of the construction of a dewatering basin for the purpose of receiving sediment-laden water pumped from a construction site to allow filtration before the water re-enters the waterway.
- II. Material Specifications**
- Riprap: Riprap shall consist of a 4-8 inch washed stone or gravel.
  - Filter Fabric: The filter cloth shall be a woven or nonwoven fabric consisting only of a continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. No. 6 stone (ASTM D 37) may be used on the inner-face for filtering instead of fabric.
  - Strawbales: Strawbales shall meet the criteria as specified in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.

- III. Construction Requirements**
- The contractor shall install all sediment and erosion control devices as the first order of business.
  - Excavated materials shall be stored such that sediments are prevented from entering the waterway; i.e., sediment perimeter controls may be necessary.
  - Excavated subsoil and topsoil shall be kept separate and replaced in their natural order.
  - Any dewatering of the construction area shall be filtered through a dewatering basin prior to entering the waterway.
  - The dewatering basin shall be excavated to a minimum depth of 3 feet.
  - Once the dewatering basin becomes filled to 1/2 of the excavated depth, accumulated sediment shall be removed and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WPA.
  - Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All ground contours shall be returned to their original condition unless specifically approved otherwise by the Administration.

**SILT FENCE**  
NOT TO SCALE



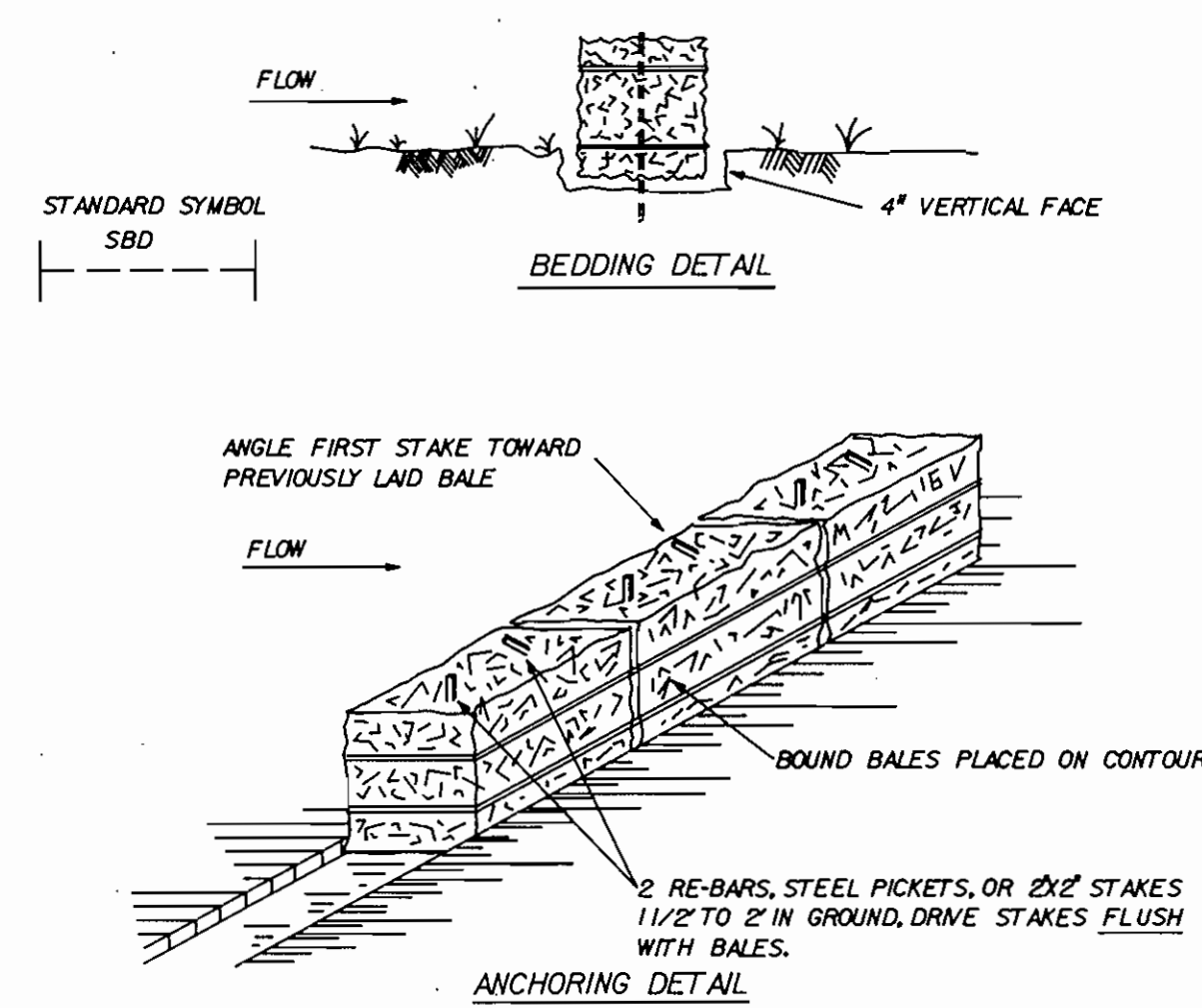
- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
  - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 2' AT TOP AND MID SECTION.
  - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REWOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.
- POSTS: STEEL EITHER T OR U TYPE OR 2\"/>

FENCE: WOVEN WIRE, 1/4 GA. 6\"/>

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA THON OR APPROVED EQUAL.

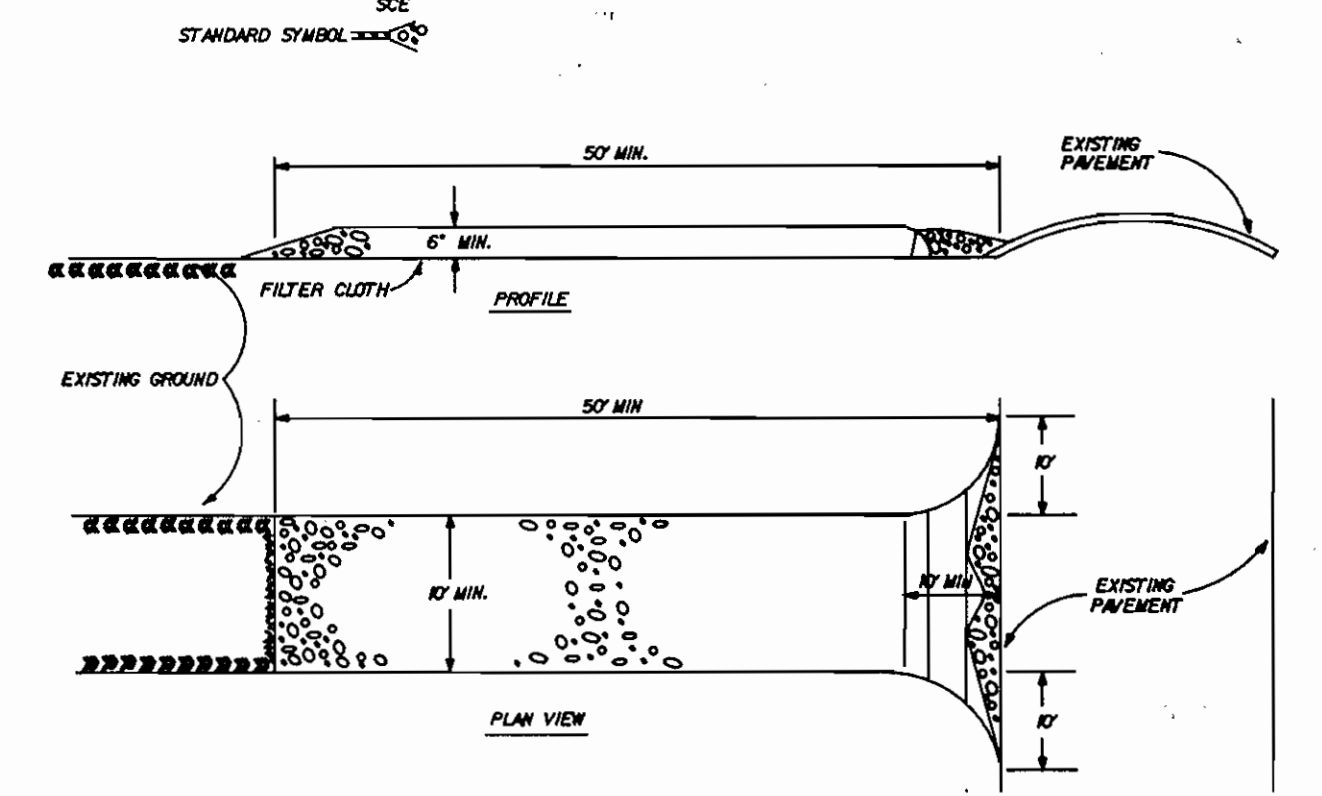
PREFABRICATED UNIT: GEOPAF, ENVIROFENCE, OR APPROVED EQUAL.

**STRAW BALE DIKE**  
NOT TO SCALE



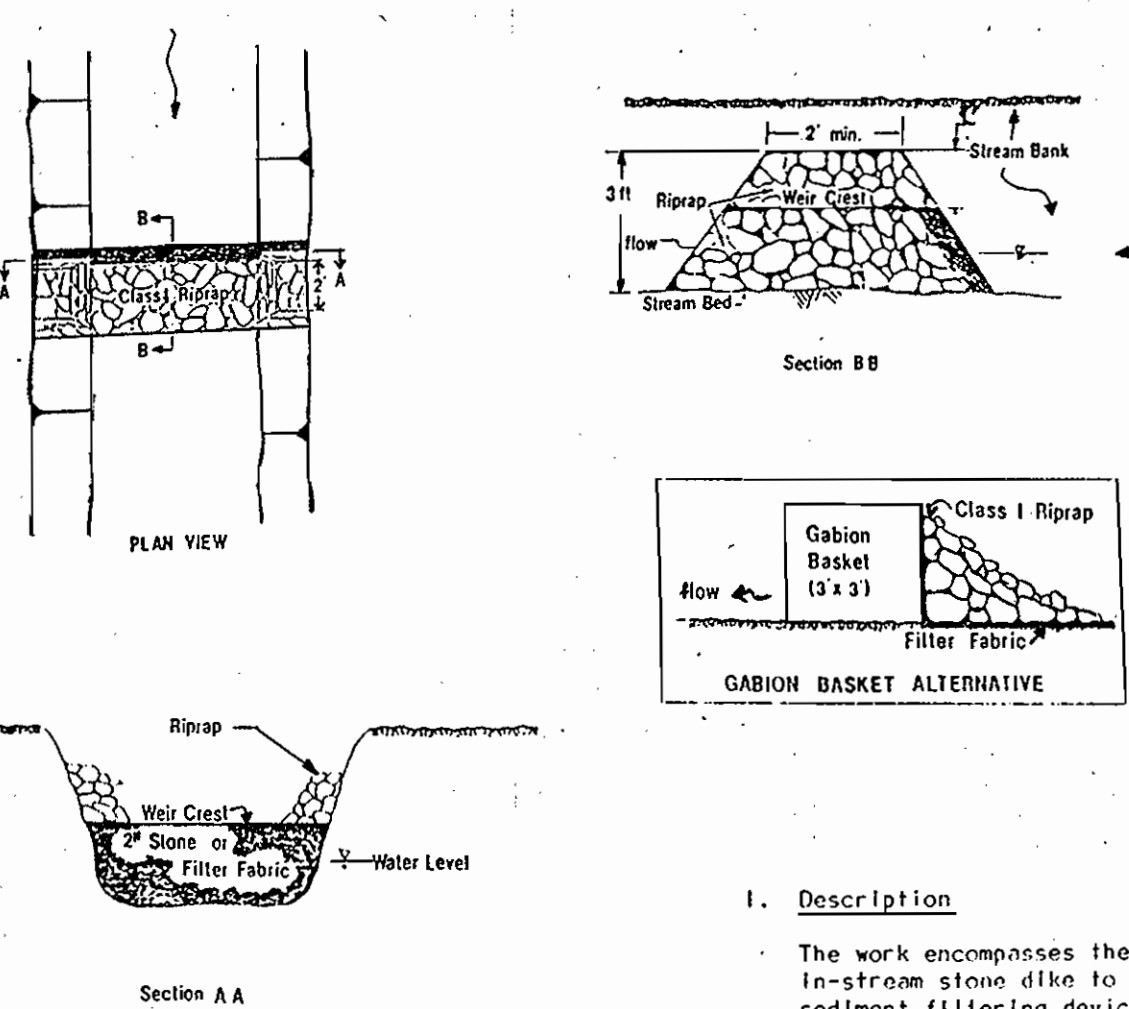
- CONSTRUCTION SPECIFICATIONS**
- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ADJUTING THE ADJACENT BALES.
  - EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
  - BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
  - INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
  - BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE



- CONSTRUCTION SPECIFICATIONS**
- STONE SIZE - USE #2 STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
  - LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
  - THICKNESS NOT LESS THAN SIX (6) INCHES.
  - WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
  - FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
  - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.
  - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAROUT OF ANY REMAINT OF ANY TRACKING USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
  - 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.
  - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

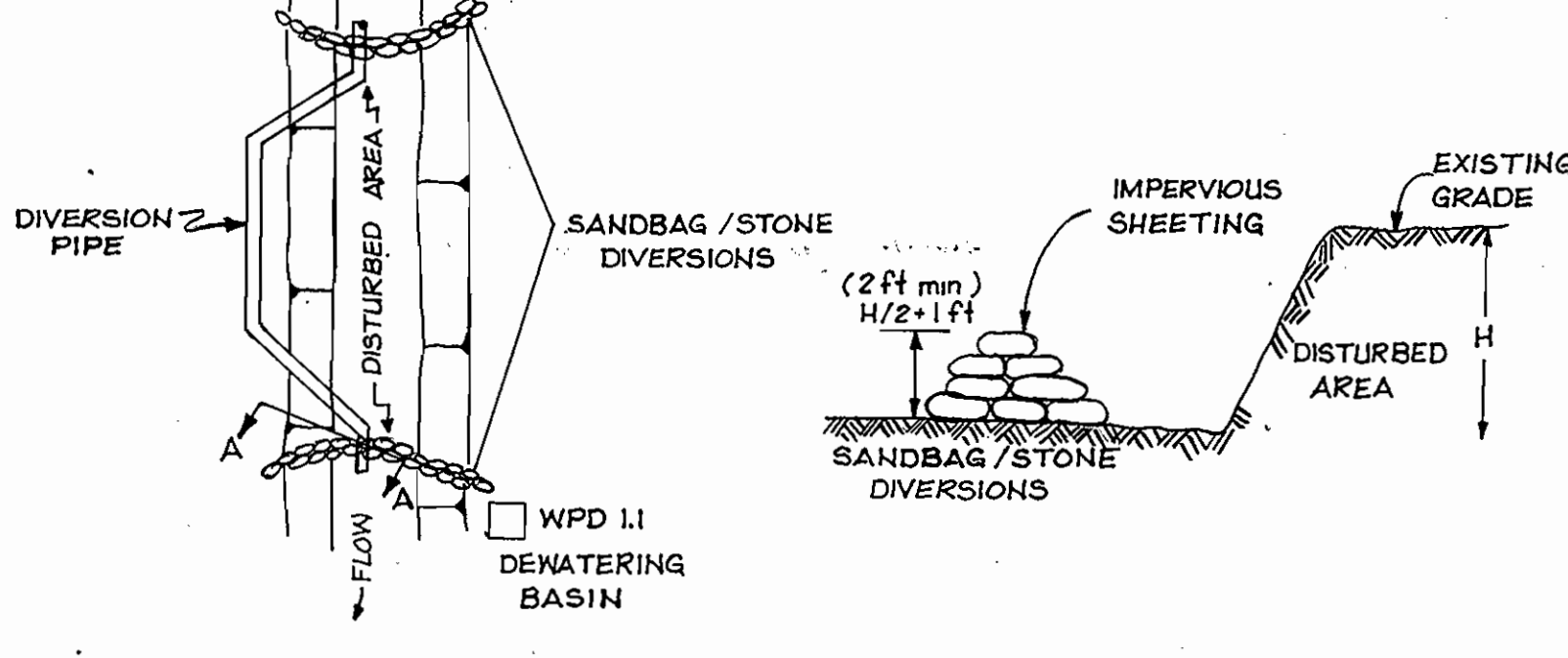
**IN-STREAM STONE DIKE**  
NOT TO SCALE



- I. Description**  
The work encompasses the installation of an in-stream stone dike to be used as a sediment filtering device for streams that generally carry well weather flow.
- II. Material Specifications**
- Small Riprap - 8-12 inch washed stone and gravel shall be used.
  - Filter Fabric - The filter cloth shall be a woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. A one foot layer of #20 washed stone may be used instead of filter fabric.
  - Gabion Baskets - Class I gabion baskets shall meet the requirements listed in WPD3.2.

- III. Construction Requirements**
- Structure to be installed in-stream as first order of business to trap sediment generated during construction activities.
  - The top width of the dike is to be from 2-4 feet.
  - The distance between the dike and the disturbance is to be determined by the rate of the waterway.
  - Gabion baskets may be used in lieu of small riprap as indicated by alternative section.
  - Structure is to remain in place until all disturbed areas have been stabilized in accordance with an approved sediment and erosion control plan.
  - Entrapped sediment is to be excavated periodically and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WPA.
  - Structure can be removed once approved by inspecting authority.

**DIVERSION PIPE**  
NOT TO SCALE



- I. Description**  
The work shall consist of installing a flow diversion structure when construction activities take place within the stream channel such as culvert construction or culvert replacement.
- II. Material Specifications**
- Sandbags: Sandbags shall consist of materials which are resistant to ultra-violet radiation, tearing and puncture and woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).
  - Stone: Stone shall be washed and have a minimum diameter of 6 inches.
  - Sheeting: Sheeting shall consist of polyethylene or other material which is impervious and resistant to puncture and tearing.
- III. Construction Requirements**
- All erosion and sediment control devices shall be installed as the first order of work.
  - The height of the sandbag/stone diversion structure shall be one half the distance from the stream bed to the bank plus one foot, as indicated in section A-A. The sandbag shall be placed on a smooth, prepared surface.
  - All excavated materials shall be disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WPA.
  - All dewatering of the construction area shall be pumped to a dewatering basin (Plate WPD1.1) or otherwise approved on the plans by the WPA.
  - Sheeting shall be overlapped a minimum of 18 inches.
  - The diversion pipe shall have a minimum diameter of sufficient size to convey the normal stream flow.
  - If necessary, silt fence or strawbales shall be installed around the perimeter of the work area.
  - Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal.

**SEQUENCE OF CONSTRUCTION**

- Obtain sediment control permit.
- Construct stabilized construction entrance as shown on plan.
- Clear and grub the areas necessary to construct the sediment control measures, then construct all sediment control measures.
- Construct water main. As construction approaches stream crossing, place the diversion pipe structure with all dewatering of the construction area being pumped to the dewatering basin. Backfill trench as construction proceeds and stabilize all disturbed areas.
- Upon completion of construction, fill in dewatering basin.
- Remove all sediment control measures and stabilize any remaining areas.

- SEDIMENT CONTROL NOTES**
- 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.
  - ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
  - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (1) 7 CALENDAR DAYS FOR ALL PERMANENT SEDIMENT CONTROL STRUCTURES, DIKES, PERMANENT SLOPES AND ALL SLOPES GREATER THAN 3:1 (1) 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 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 SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52) TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
  - 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:  
TOTAL AREA OF SITE 0.54 ACRES  
AREAS DISTURBED 0.27 ACRES  
AREA TO BE ROOFED OR PAVED 0.05 ACRES  
AREA TO BE VEGETATIVELY STABILIZED 0.09 ACRES  
TOTAL CUT N/A CU. YDS.  
TOTAL FILL N/A CU. YDS.  
OFFSITE WASTE/ AREA LOCATION TO BE PROVIDED BY CONTRACTOR.

- 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.
- Soil Amendments: In lieu of soil test recommendations, use one of the following schedules
- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/100 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 ureaform fertilizer (9 lbs/100 sq ft) before seeding. Harrow or disc into upper three inches of soil.
  - Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 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 (11.4 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 (1 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 1, 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/100 sq ft) of unruffed 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 granulated asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.
- Maintenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

- 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.
- Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)
- Seeding: For period March 1 thru April 30 and from August 15 thru November 15, seed with 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 (1.07 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 unruffed 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) for anchoring.
- Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
*James M. Kelly* 11/15/89  
S.O. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*John L. Kinton* 11/15/89  
HOWARD S.C.D. DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 210 OF THE STANDARD SPECIFICATION, AND SITE PLANS

BEFORE BEGINNING CONSTRUCTION, CONTACT 'MISS UTILITY' AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

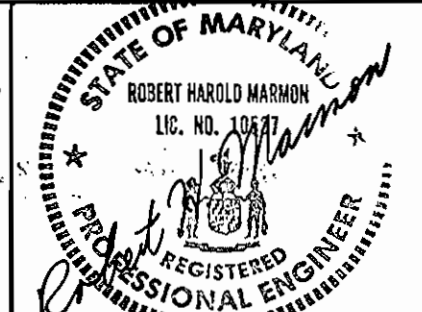
*James M. Kelly* 11/7/89  
DIRECTOR OF PUBLIC WORKS DATE

*Robert S. Brown* 11-7-89  
CHIEF, BUREAU OF UTILITIES DATE

*John L. Kinton* 11-6-89  
CHIEF, UTILITY DESIGN DIVISION DATE

ENGINEERS-ARCHITECTS-PLANNERS-SCIENTISTS-SURVEYORS-PHOTOGRAMMETRISTS  
GREENHORNE & O'MARA, INC.  
113 WEST ROAD, SUITE 208  
BALTIMORE, MARYLAND 21204

(301) 296-4100



DES:	
DRN:	D.T.W.
CHK:	R.H.M.
DATE:	5/10/89
BY:	NO.
REVISIONS:	

**SEDIMENT CONTROL DETAILS**

DATE: 600' SCALE MAP NO. BLOCK NO.

**TURF VALLEY ROAD WATER MAIN**  
CAPITAL PROJECT NO. W-8166  
CONTRACT NO. 44-1949  
SECOND ELECTION DISTRICT  
HOWARD CO., MARYLAND

SCALE AS SHOWN  
SHEET 4 of 4