

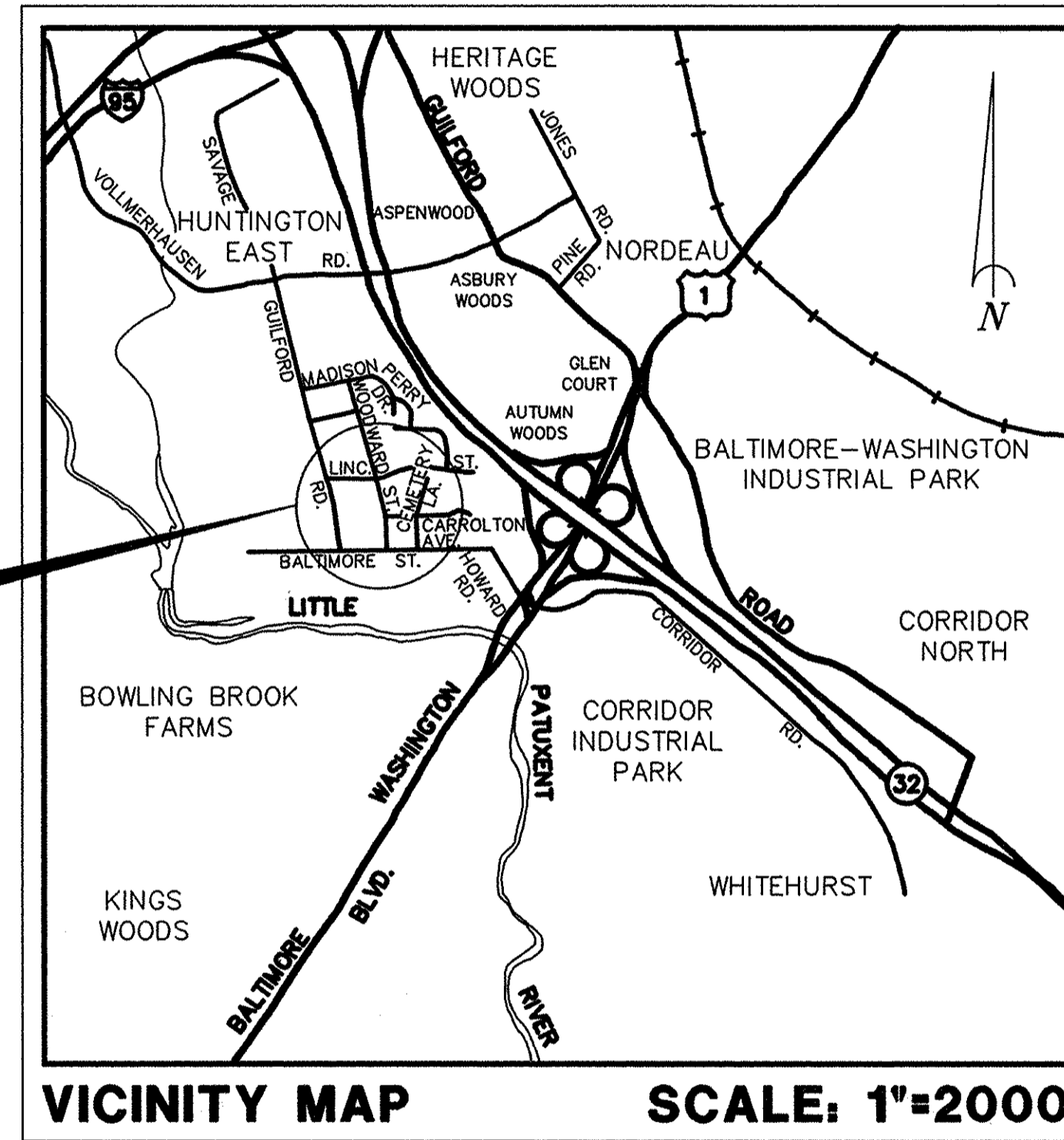
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

INDEX TO SHEETS

1. COVER SHEET
2. GENERAL NOTES, MISCELLANEOUS DETAILS, AND MAINTENANCE OF TRAFFIC
3. EROSION AND SEDIMENT CONTROL NOTES & DETAILS
4. EROSION AND SEDIMENT CONTROL PLAN
5. PLAN
6. STORM DRAIN PROFILES AND SCHEDULES

PROJECT SITE



WOODWARD STREET DRAINAGE IMPROVEMENTS

CAPITAL PROJECT NO. D-1078A

CERTIFICATION BY DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT."

Robert J. Seaman
SIGNATURE OF DEVELOPER

3/24/98
DATE

CERTIFICATION BY THE ENGINEER

"I 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 COUNTY SOIL CONSERVATION DISTRICT."

John E. Harms, Jr.
SIGNATURE - JOHN E. HARMS, JR. & ASSOC., INC.

1/24/98
DATE

REVIEW FOR Howard S.C.D.
NAME

AND MEETS TECHNICAL REQUIREMENTS

Clay Simman 3/31/98
SIGNATURE

JR
U.S. SOIL CONSERVATION SERVICE

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

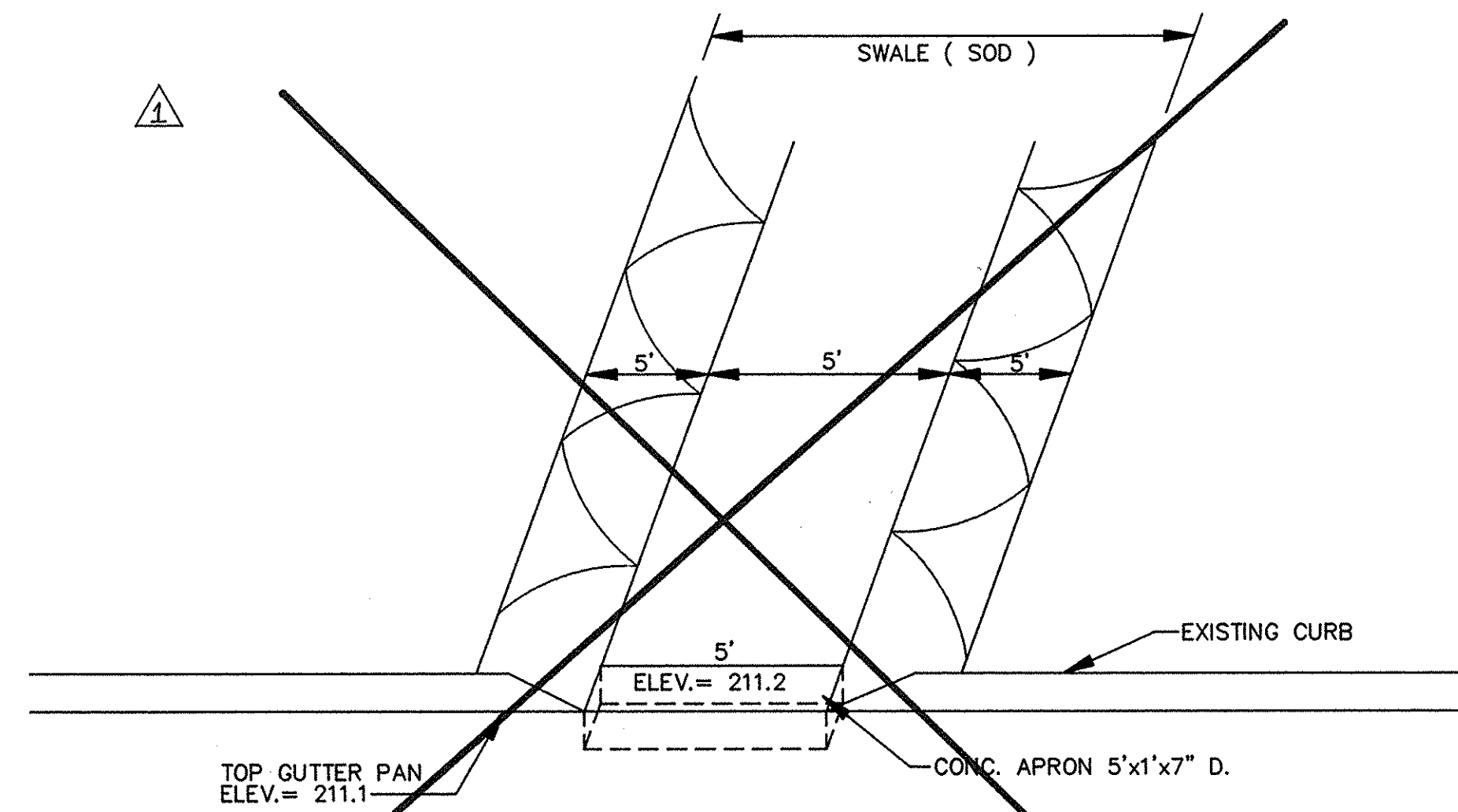
APPROVED: *John R. P. [Signature]* 3/31/98
DATE

HOWARD S.C.D.

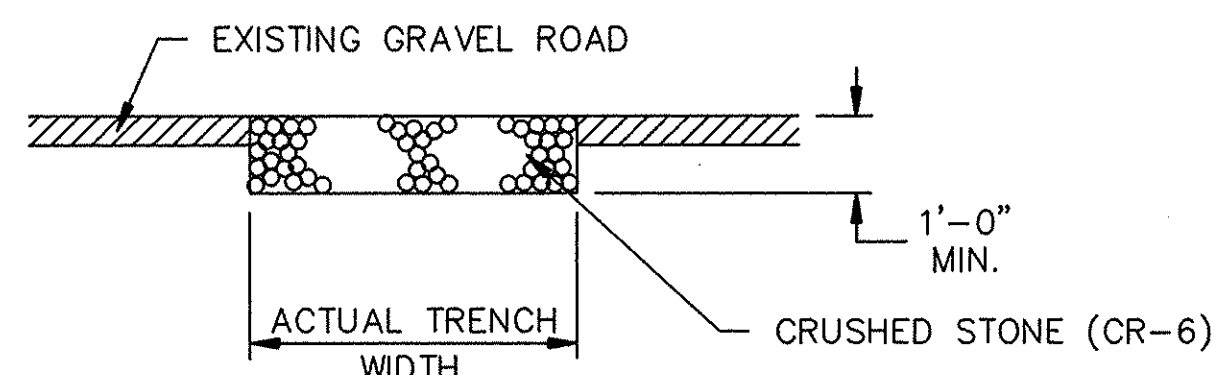
LOCATION OF EXISTING UTILITIES HAS BEEN SHOWN ON THE PLANS FOR THE CONTRACTOR'S CONVENIENCE ONLY. NO WARRANTY OF COMPLETENESS OR ACCURACY OF SAID LOCATIONS IS MADE BY THE OWNER OR ENGINEER. THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATIONS PRIOR TO THE START OF CONSTRUCTION.

RIGHT-OF-WAY LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL FEE RIGHT-OF-WAY AND EASEMENT INFORMATION REFER TO THE APPROPRIATE RIGHT-OF-WAY PLATS.

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>James J. [Signature]</i> 3/24/98 DIRECTOR OF PUBLIC WORKS DATE</p> <p><i>Robert J. Seaman</i> 3/24/98 CHIEF, BUREAU OF ENGINEERING DATE</p> <p><i>Charles M. [Signature]</i> 3/24/98 CHIEF, BUREAU OF HIGHWAYS DATE</p>	<p>JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-647-6000</p>		<p>DES: D.M.D.</p> <p>DRN: J.R.R.</p> <p>CHK: S.G.Z.</p> <p>DATE: 1/94</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>BY</th> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	BY	NO.	REVISION	DATE					<p>COVER SHEET</p>	<p>WOODWARD STREET</p>	<p>SCALE AS SHOWN</p> <p>SHEET 1 OF 6</p>
BY	NO.	REVISION	DATE												
				<p>600' SCALE MAP NO. 47 BLOCK NO. 11</p>											

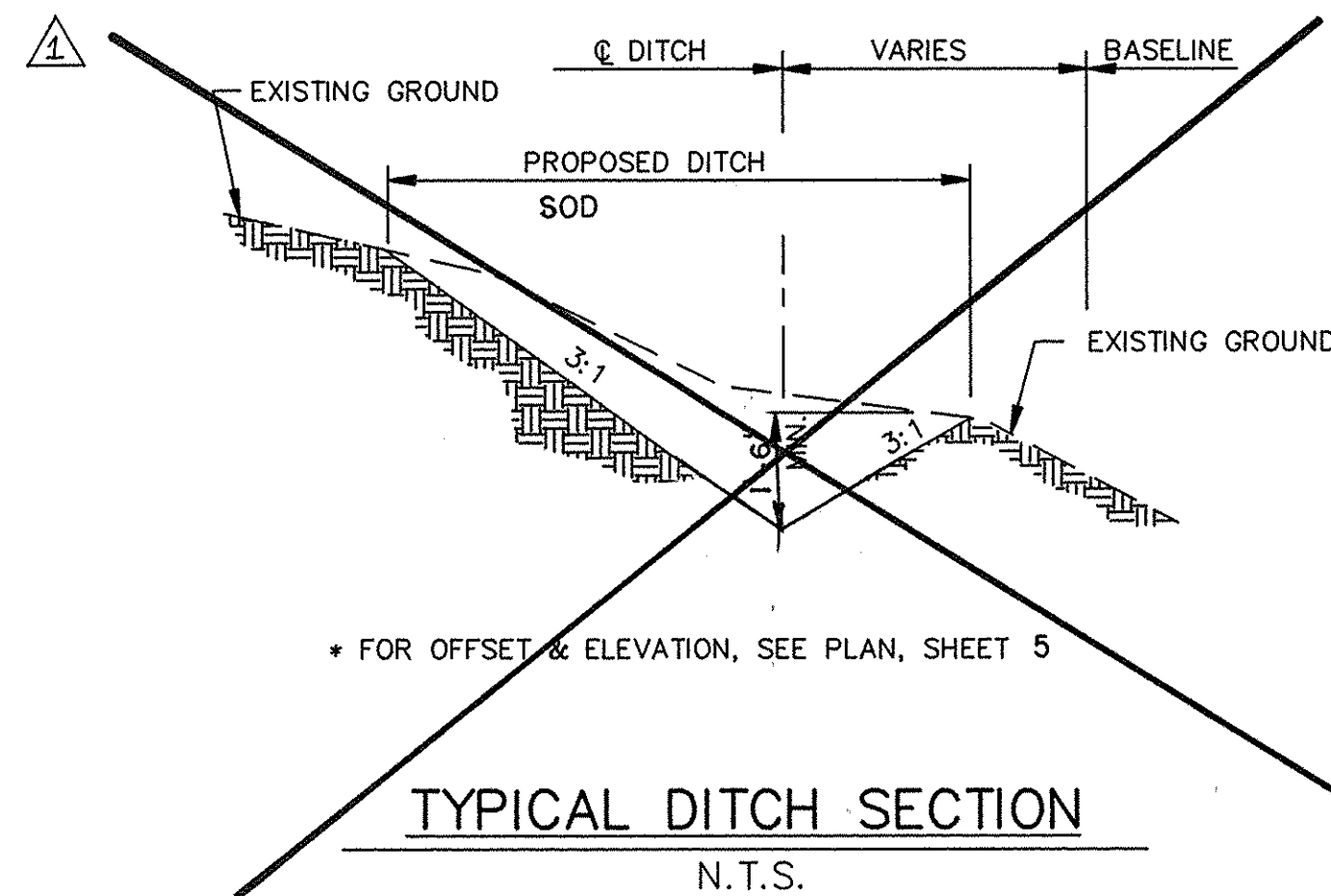


TYPICAL DETAIL, CURB CUT
N.T.S.
(STA. 4+00 LT. #3)



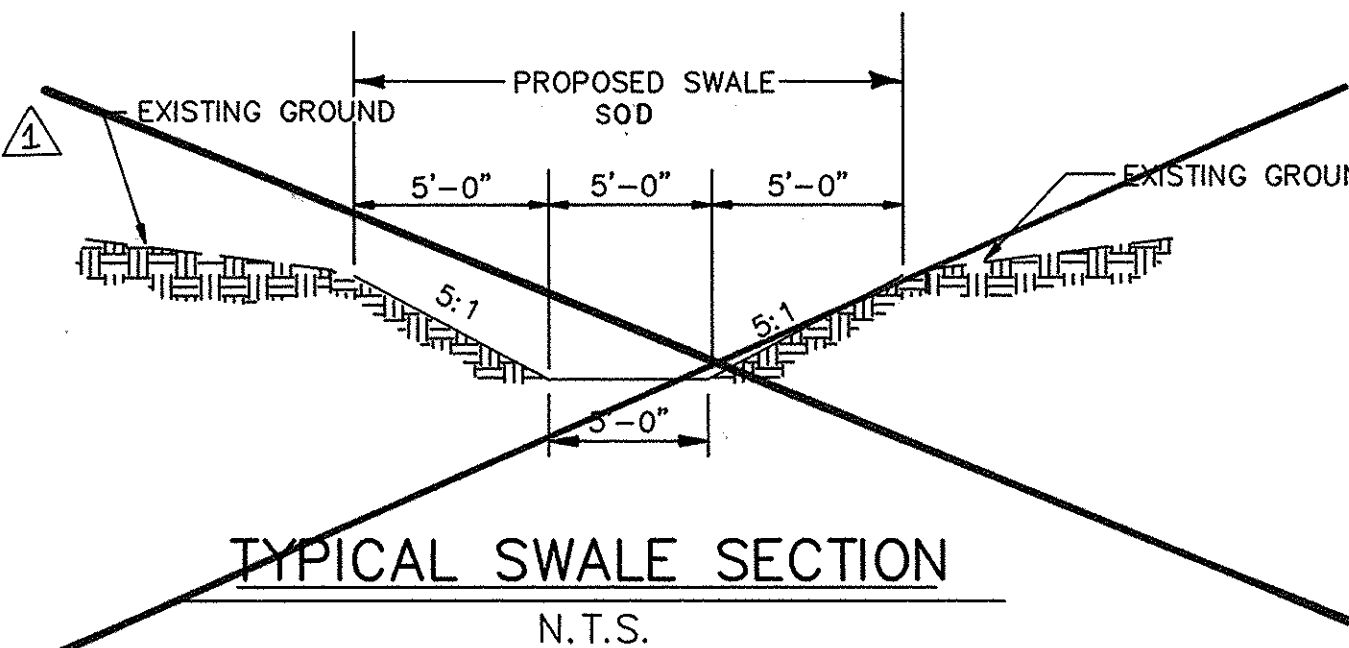
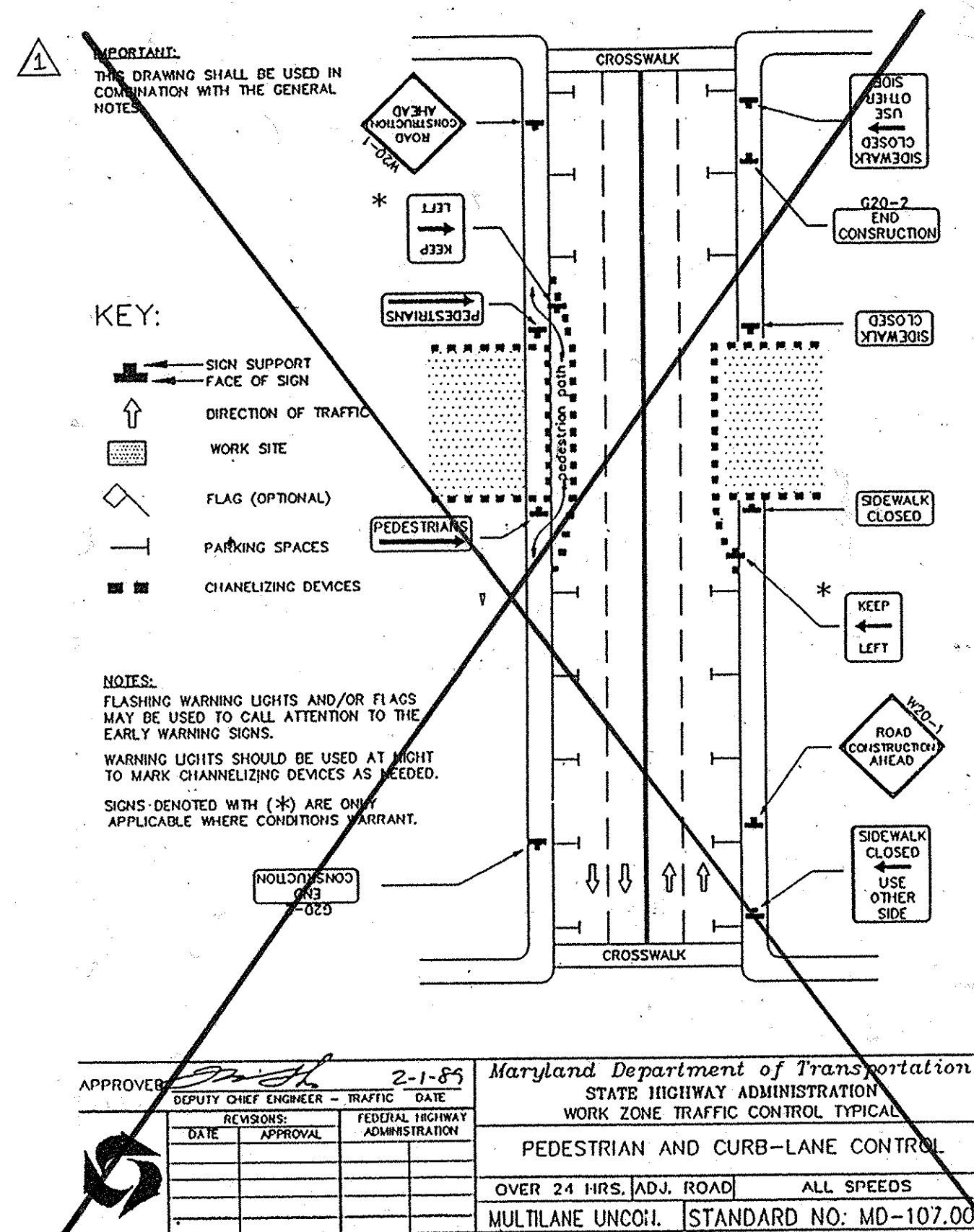
1. ALL COSTS FOR TRENCH EXCAVATION, BACKFILL MATERIALS, TOOLS, LABOR, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE OF THE VARIOUS DRAINAGE ITEMS AND WILL NOT BE MEASURED OR PAID SEPARATELY.

PARKING LOT PAVEMENT REPAIR
N.T.S.



MAINTENANCE OF TRAFFIC GENERAL NOTES

- 1.) ALL CONSTRUCTION AND MATERIALS FOR THE TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE STANDARDS CONTAINED IN THE 1988 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND ANY SUBSEQUENT ADDENDA.
- 2.) ACCESS TO ALL PRIVATE DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES BETWEEN THE HOURS OF 3:00 PM AND 9:00 AM. BETWEEN THE HOURS OF 9:00 AM AND 3:00 PM, ACCESS SHALL BE MAINTAINED EXCEPT WHEN PROHIBITED BY AN OPEN TRENCH. ALL AFFECTED RESIDENTS SHALL BE NOTIFIED AT LEAST ONE (1) HOUR PRIOR TO CLOSING OF ANY DRIVEWAY.
- 3.) TRAVEL LANES SHALL BE A MINIMUM OF TEN FEET IN WIDTH. WHEN ONLY ONE LANE IS OPEN, FLAGMEN AND THE APPROPRIATE SIGNING SHALL BE PROVIDED. THE ROADWAY SHOULD BE REOPENED TO TWO LANES AT NIGHT.
- 4.) IF A DROPOFF MEASURES GREATER THAN 4", A BARRIER OR 2:1 SLOPE OF COMPACTED CRUSHER-RUN GRAVEL WILL BE REQUIRED.
- 5.) ALL OPEN TRENCHES SHALL BE CLOSED AT THE END OF EACH DAY. IF STEEL PLATES ARE TO BE USED, APPROPRIATE SIGNING IS REQUIRED.
- 6.) ALL SIGNS THAT DO NOT APPLY SHALL BE COVERED.
- 7.) ALL CONES AND FLAGMEN SHALL BE MOVED ACCORDINGLY AS CONSTRUCTION PROGRESSES.
- 8.) ALL CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE TYPICAL SIGN PLACEMENT SHOWN ON THESE PLANS AND SHALL NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
- 9.) CONSTRUCTION AND WORKMENS VEHICLES SHALL NOT BE PARKED IN A MANNER THAT WILL IMPEDE TRAFFIC OR IMPAIR SIGHT DISTANCE.
- 10.) WHERE TRAFFIC IS BEING MAINTAINED ON ONE SIDE OF THE ROAD WHILE CONSTRUCTION TAKES PLACE ON THE OTHER, APPROPRIATE BARRIERS, BARRICADES OR DRUMS SHALL BE PLACED BETWEEN THE TRAVEL WAY AND THE CONSTRUCTION AREA. APPROVED TYPE A LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE USED DURING HOURS OF DARKNESS. BOTH TRAVEL DIRECTIONS WILL BE POSTED WITH A SEQUENCE OF TRAFFIC CONTROL SIGNS AS INDICATED ON THE TRAFFIC CONTROL TYPICALS. ANY CROSSOVERS SHALL BE MARKED WITH APPROVED CHANNELIZATION DEVICES AND SIGNS.



GENERAL NOTES

1. Right of Way lines shown on these plans are shown for the assistance in interpreting the Plans. For any Fee Right of Way and Easement information, see Right of Way Plats.
2. All pipe elevations are invert elevations.
3. All disturbed areas shall receive seeding & mulching except where otherwise indicated on plans or as directed by the Engineer.
4. The Contractor shall install and maintain all Temporary Sediment Control Measures as shown on the drawings. However, any Sediment Control Measures, not specifically indicated in the Contract Documents, but required as a result of the Contractors excavations or activities shall not be cause for Extra Payment.
5. Location Points for Inlets, Manholes, and Structures

Item	Horizontal Location	Vertical Location
Curb Type Inlets	Center Face of Curb	Top of Curb
Grate Type Inlets	Center of Grate	Top of Grate
Manholes	Center of Structure	Top of Structure
Structures w/Stack	Center of Structure	Top of Structure
Endwalls	Center of Wall	Pipe Invert
6. Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense. Existing utilities have been located from available as-built drawings and field surveys.
7. The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in the vicinity of utilities. Costs for locating existing utilities and for adjusting utility appurtenances to meet finished grades will not be measured or paid for by the Engineer.
8. Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans.

Howard County Division of Sediment Control 880-3450
 Miss Utility 1-800-257-7777
 Balt. Gas & Electric Company- Underground Electric Distribution Eng. "Damage Control" 787-9068
 Balt. Gas & Electric Company- Underground Gas Distribution Eng. "Damage Control" 787-9068
 Chesapeake and Potomac Telephone Company Repair Service 954-2222
 Howard County Bureau of Utilities 313-4900
 Howard Cable TV 461-1156
 Howard County Division of Traffic Engineering 313-2430
 Howard County Surveying and Drafting Division 313-2417
 Howard County Bureau of Construction Inspection 313-1870
9. All manholes shall be 4'-0" inside diameter
10. Standard details for this contract shall be the Howard County Standard Details as supplemented by the Maryland State Highway Administration Standard Details, Maryland State Standards & Specifications for Soil Erosion & Sediment Control, and Manual on Uniform Traffic Control Devices of the U.S. Department of Transportation.
11. Trees are to be protected from damage to the maximum extent. Trees located outside the construction strip are not to be removed or damaged by the contractor
12. Contractor shall remove trees, stumps and roots, along line of excavation as directed by the Engineer. Payment for such removal shall be included in the lump sum price bid for Clearing and Grubbing.
13. Place regulation and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
14. Top elevations of structures shall be adjusted in the field to meeting existing conditions as directed by the Engineer.
15. Grading shall be done in such a manner so as to insure positive drainage to the proposed Inlet Structures.
16. Horizontal and vertical Controls are based on the Maryland State Grid Coordinate System as projected by Howard County - Geodetic Control Point Numbers 1942005 & 1942006, NAD27 (Vertical Control NAD29).
17. Surveys performed by Loiderman Associates, 1990, updated by Harms & Associates, 1993.
18. For Details not shown on the drawings, and for Materials and Construction Methods, the Contractor shall abide by the Howard County Design Manual, Volume IV, "Standard Specifications and Details for Construction" and the Special Provisions. In the event of any discrepancy between these two sources, the latter shall govern.
19. Existing fences, mailboxes, signs and shrubs disturbed by the work shall be reconstructed or replaced in kind.
20. Clearance between existing and proposed utilities shall be a minimum of 1'-0" . clearance between all utility poles and proposed utilities shall be a minimum of 5'-0". Cost of bracing at poles shall be included in the unit price bid for storm drain structures except where specified otherwise.

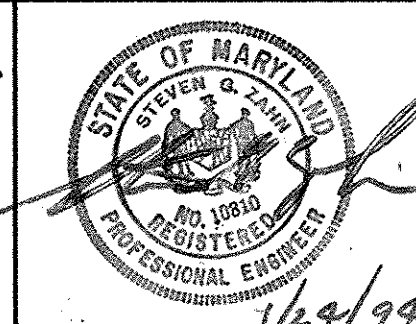
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. ... 3/26/98
DIRECTOR OF PUBLIC WORKS
Charles M. ... 3-26-98
CHIEF, BUREAU OF HIGHWAYS

Paul ... 3/24/98
CHIEF, BUREAU OF ENGINEERING

Blaine ... 3/28/98
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT

JOHN E. HARMS, JR. & ASSOCIATES, INC.
CONSULTING ENGINEERS
90 GOV. RITCHIE HIGHWAY
PASADENA, MARYLAND
301-647-6000



DES: D.M.D.	S.A.Q.	REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN	3/18/98
DRN: J.R.R.			
CHK: S.G.Z.			
DATE: 1/94	BY	NO.	REVISION

**GENERAL NOTES,
MISCELLANEOUS DETAILS**

600' SCALE MAP NO. 47 BLOCK NO. 11

WOODWARD STREET

SCALE AS SHOWN
SHEET 2 OF 6

SEDIMENT CONTROL NOTES

- All Grading Permits shall be obtained prior to the starting of any Grading work.
- 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 (313-1855)
- All vegetation 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.
- 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.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, Storm Drainage, of the Howard County Design Manual.
- 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 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 R/W and easements	4.1 acres
Area disturbed	0.37 acres
Area to be roofed or paved	0.08 acres
Area to be vegetatively stabilized	0.29 acres
Total cut	137 cu. yds.
Total fill	0 cu. yds.
Offsite waste/borrow area location	To be determined by contractor, with pre-approval of the Sediment Control Inspector
- 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 controls 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 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.
- See Sheet No. 5 for additional Sediment and Erosion Control Notes and Details.

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 3 inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Use one of the following schedules:

- 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 3 inches of soil. At time of seeding apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs./1000 sq. 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 disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30 and August 1 thru October 15, seed with 60lbs. 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. of 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. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw.

Mulching: Apply 1 1/2 to 2 tons per acre (70-90 lbs./1000 sq. ft.) of un-rotted 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 reseedings.

TEMPORARY SEEDING

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 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 feet or higher, use 348 gal. per acre (8 gal./1000 sq. ft.) for anchoring.

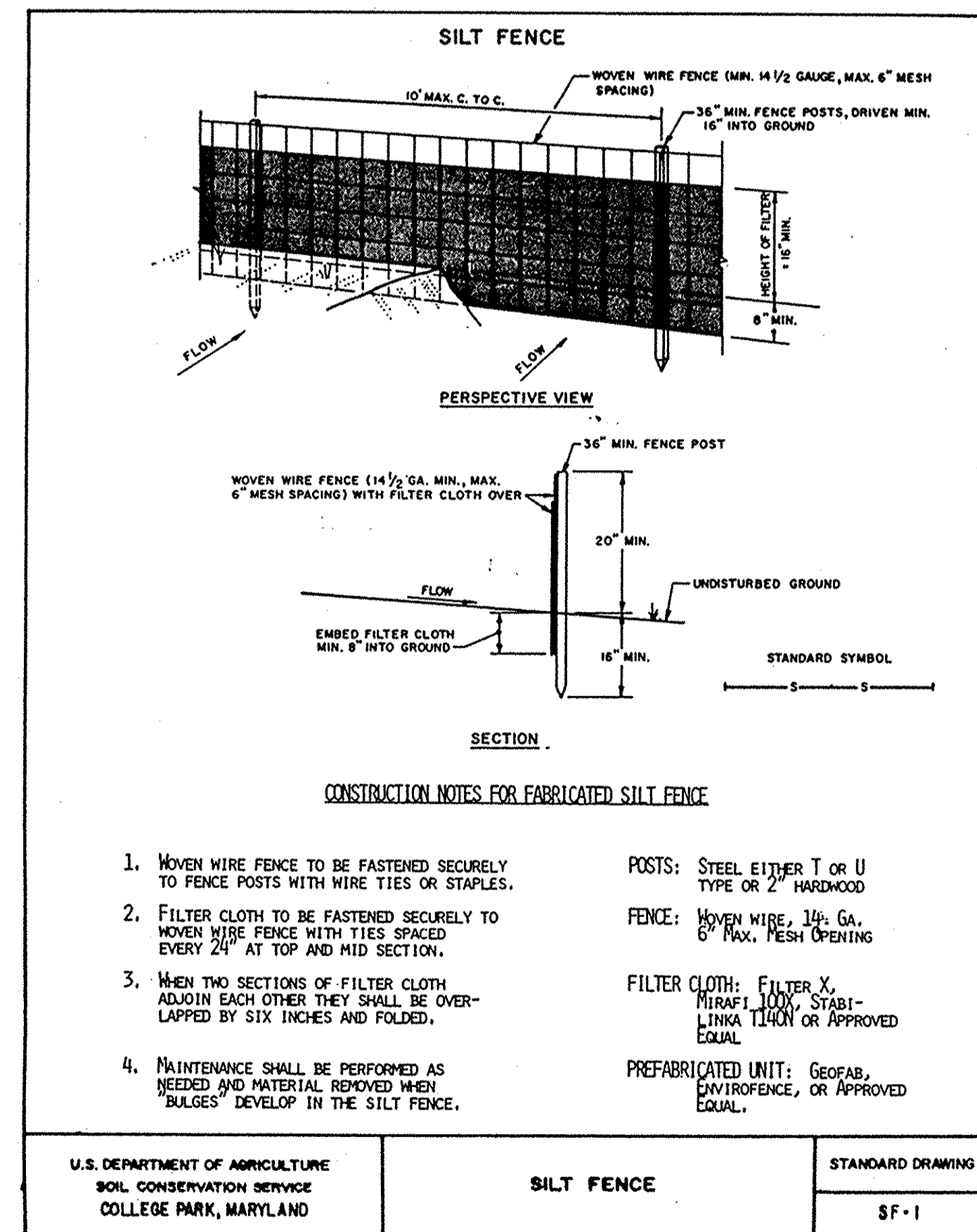
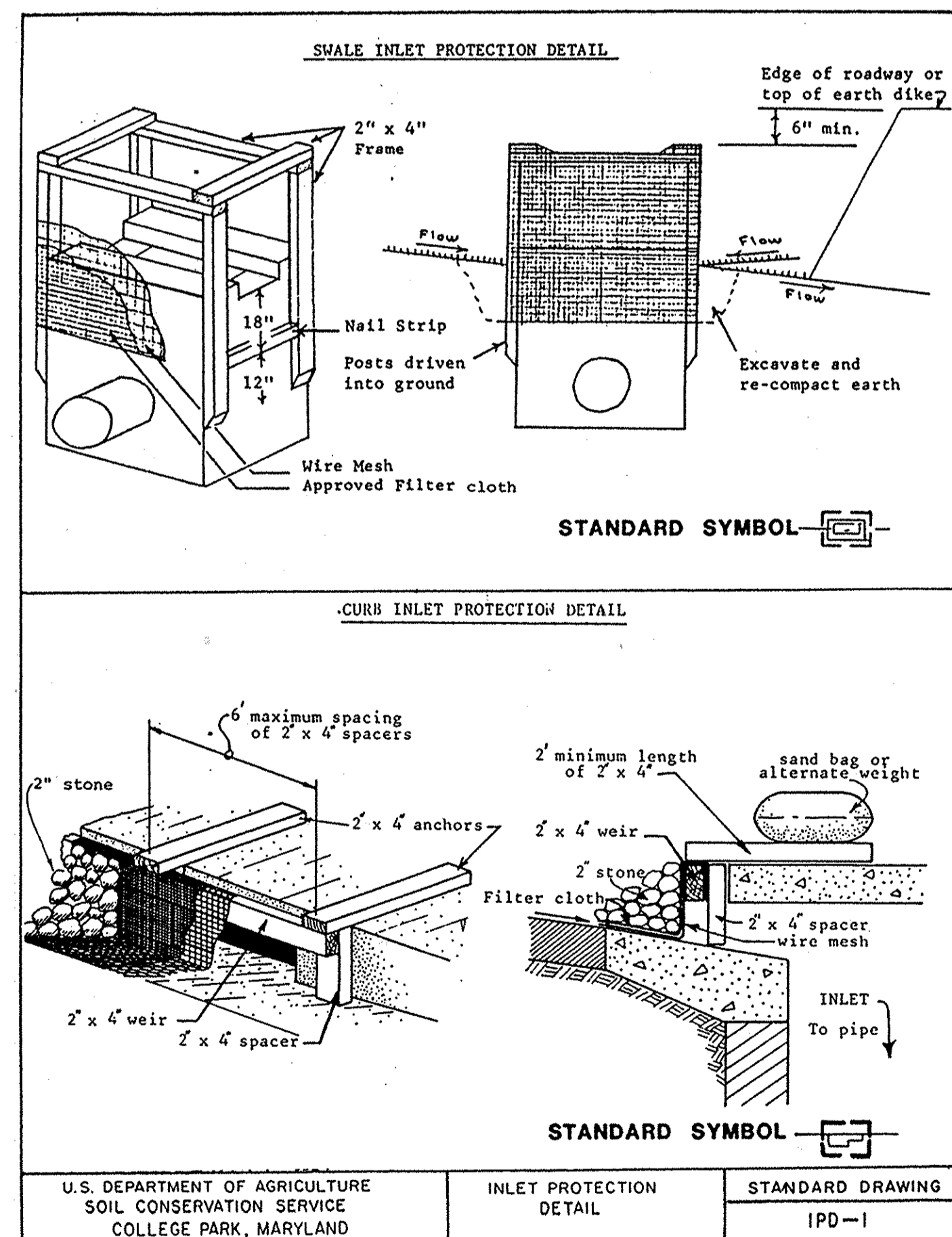
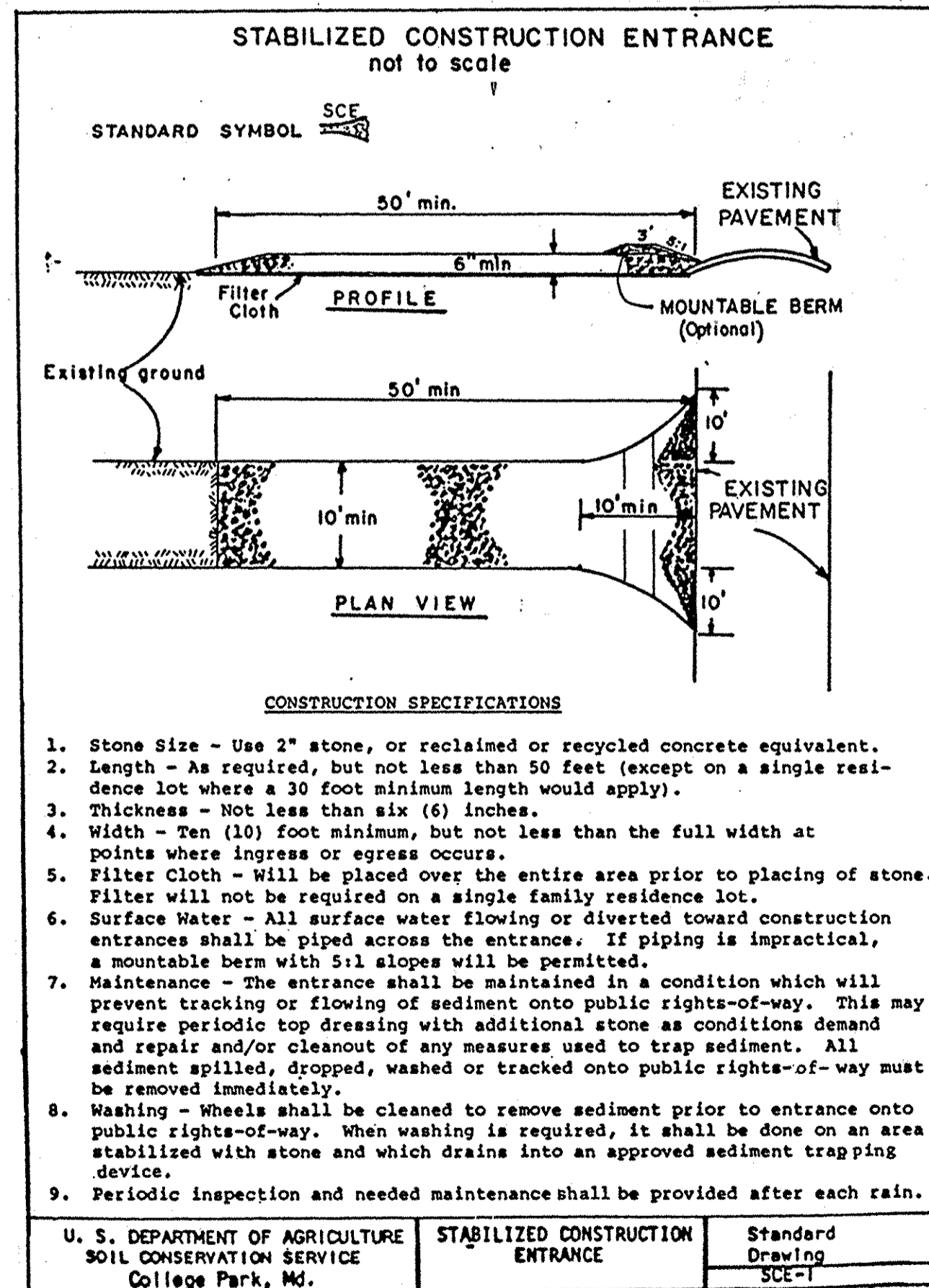
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

EROSION & SEDIMENT CONTROL - SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMITS
- CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES AND DEVICES (1 WEEK)
- INSTALL SEDIMENT CONTROL MEASURES AND DEVICES AS OUTLINED ON PLAN.(SHEET 5)(1 WEEK)
- NOTIFY HOWARD COUNTY SEDIMENT CONTROL INSPECTOR UPON COMPLETING INSTALLATION OF PERIMETER CONTROL.
- PERFORM WORK AS OUTLINED ON PLAN.(SHEET 5) (3 WEEKS)
- STABILIZE DISTURBED AREAS AND INSTALL ROADSIDE DITCH LINING AS OUTLINED IN THE SCHEDULES.(SHEET 6) (1 WEEK)
- REMOVE SEDIMENT CONTROL MEASURES AND DEVICES WITH PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR AND STABILIZE ANY REMAINING AREAS

NOTES:

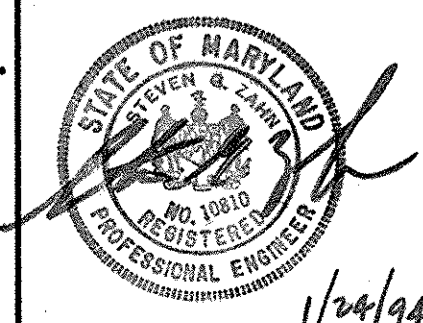
- SILT FENCE TO BE PLACED ON LOW SIDE OF TRENCH
- OPEN TRENCH LENGTH IS LIMITED TO 3 PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE DAY
- EXCAVATED MATERIAL TO BE PLACED ON UPHILL SIDE OF TRENCH
- SOD PLACEMENT, IF NECESSARY, SHALL BE IN ACCORDANCE WITH SHA STANDARD SPECIFICATIONS, JANUARY 1982 EDITION & JANUARY 1988 AMENDMENTS, SECTION 707.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature] 3/26/95
 Chief, Bureau of Engineering: [Signature] 3/24/95
 Chief, Bureau of Highways: [Signature] 3/26/95
 Chief, Division of Transportation Projects and Watershed Management: [Signature] 3/26/95

JOHN E. HARMS, JR. & ASSOCIATES, INC.
CONSULTING ENGINEERS
90 GOV. RITCHIE HIGHWAY
PASADENA, MARYLAND
301-647-6000



DES: D.M.D.
 DRN: J.R.R.
 CHK: S.G.Z.
 DATE: 1/94
 BY NO. REVISION DATE

EROSION AND SEDIMENT NOTES AND DETAILS

600' SCALE MAP NO. 47 BLOCK NO. 11

WOODWARD STREET

SCALE AS SHOWN
 SHEET 3 OF 6

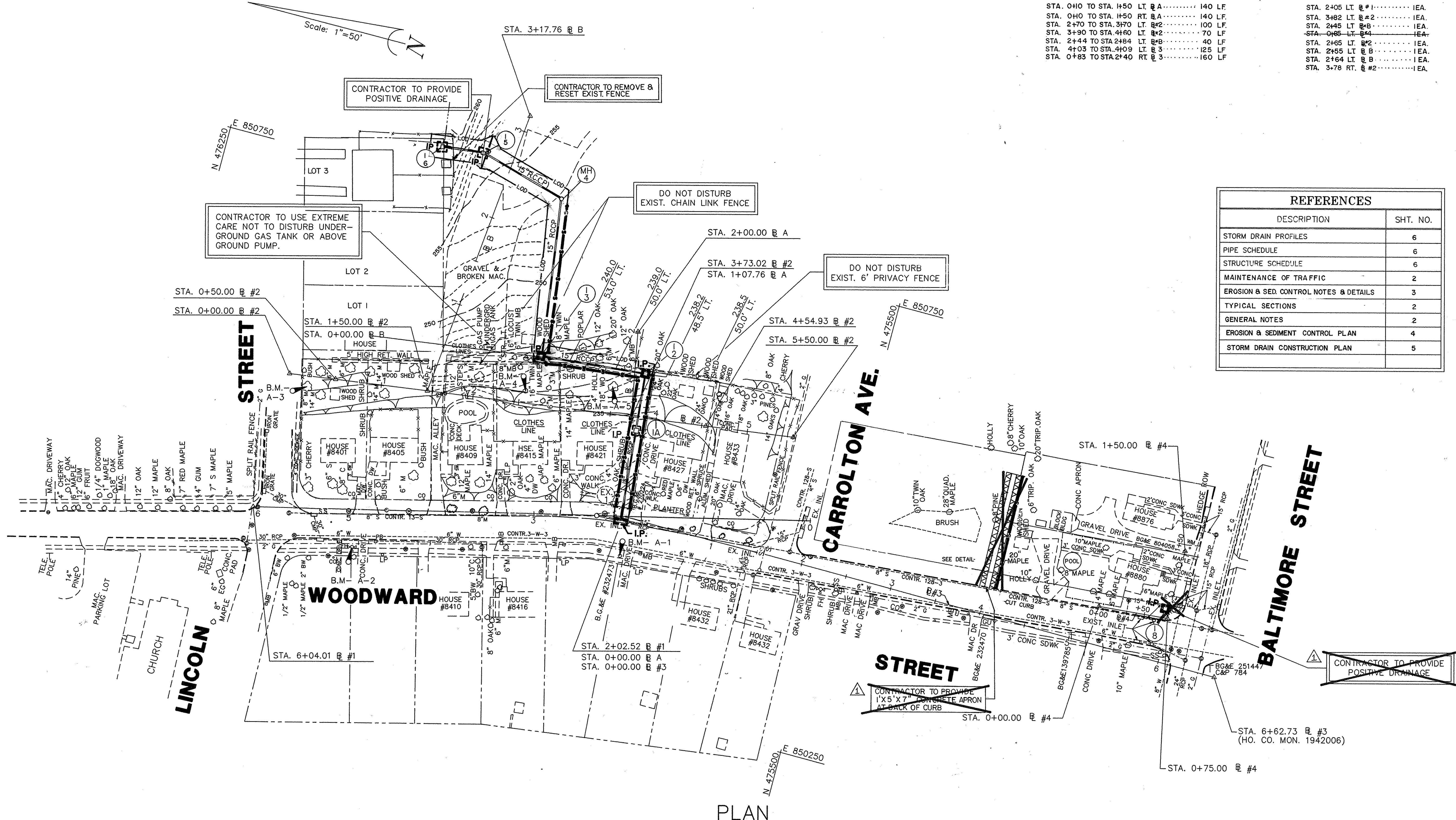
CONSTRUCT SILT FENCE

CONSTRUCT INLET PROTECTION

STA. 0+00 TO STA. 1+50 LT. @ A 140 LF
 STA. 0+00 TO STA. 1+50 RT. @ A 140 LF
 STA. 2+70 TO STA. 3+70 LT. @ #2 100 LF
 STA. 3+90 TO STA. 4+60 LT. @ #2 70 LF
 STA. 2+44 TO STA. 2+84 LT. @ B 40 LF
 STA. 4+03 TO STA. 4+09 RT. @ 3 125 LF
 STA. 0+83 TO STA. 2+40 RT. @ 3 160 LF

STA. 2+05 LT. @ #1 IEA
 STA. 3+82 LT. @ #2 IEA
 STA. 2+45 LT. @ B IEA
 STA. 0+65 LT. @ #4 IEA
 STA. 2+65 LT. @ #2 IEA
 STA. 2+55 LT. @ B IEA
 STA. 2+64 LT. @ B IEA
 STA. 3+78 RT. @ #2 IEA

Scale: 1"=50'



REFERENCES	
DESCRIPTION	SHT. NO.
STORM DRAIN PROFILES	6
PIPE SCHEDULE	6
STRUCTURE SCHEDULE	6
MAINTENANCE OF TRAFFIC	2
EROSION & SED. CONTROL NOTES & DETAILS	3
TYPICAL SECTIONS	2
GENERAL NOTES	2
EROSION & SEDIMENT CONTROL PLAN	4
STORM DRAIN CONSTRUCTION PLAN	5

FOR EROSION & SEDIMENT CONTROL USE ONLY

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works 3/24/98 DATE	JOHN E. HARMS, JR. & ASSOCIATES, INC. CONSULTING ENGINEERS 90 GOV. RITCHIE HIGHWAY PASADENA, MARYLAND 301-647-6000		DES: D.M.D.	S.A.Q.	REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN	3/18/98	EROSION AND SEDIMENT CONTROL PLAN	SCALE AS SHOWN
			DRN: J.R.R.	CHK: S.G.Z.	DATE: 1/94	BY NO.		

COORDINATE TABLE			
STATION	BASELINE	NORTH	EAST
0+00.00	B #1	475533.2485	850500.7187
2+02.52	B #1	475730.1780	850453.4628
6+04.01	B #1	476120.5840	850359.7796
0+00.00	B #2	476119.4021	850508.9492
0+50.00	B #2	476069.8620	850515.7147
4+54.93	B #2	475668.6540	850570.5060
5+50.00	B #2	475574.4603	850583.3696
0+00.00	B A	475730.1780	850453.4628
2+00.00	B A	475766.6094	850650.1167
3+17.76	B B	475939.5415	850845.4662
6+62.73	B 3	475067.4600	850450.4100
-0+00.00	B 4	475207.3387	850492.1314
-0+75.00	B 4	475132.6013	850498.6238
-1+50.00	B 4	475132.6754	850573.5934

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GENERAL NOTES	2
EROSION & SEDIMENT CONTROL PLAN	4

BENCHMARKS

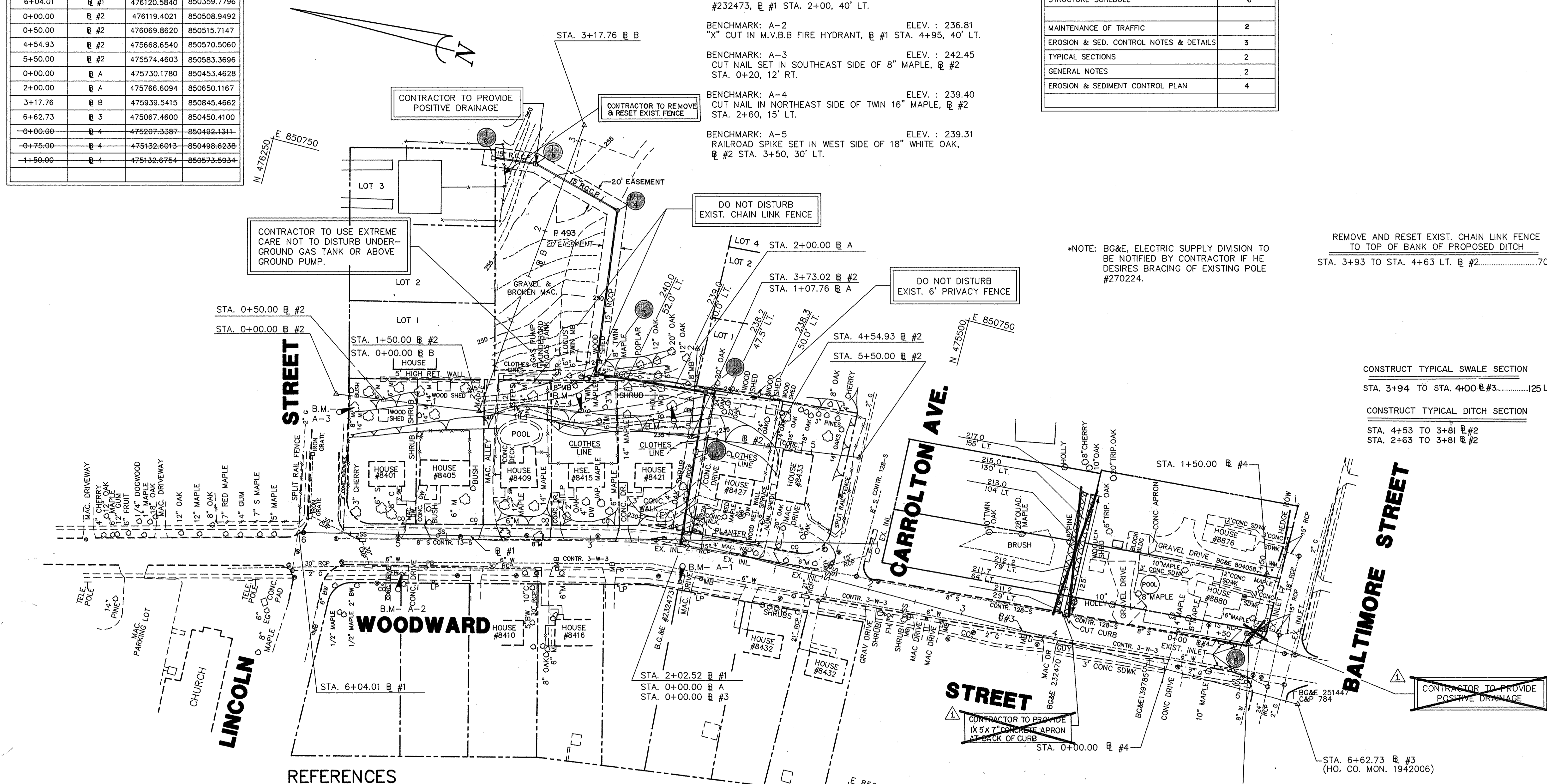
BENCHMARK: A-1 ELEV.: 226.00
RAILROAD SPIKE SET IN WEST SIDE OF B.G.&E POLE #232473, B #1 STA. 2+00, 40' LT.

BENCHMARK: A-2 ELEV.: 236.81
"X" CUT IN M.V.B.B FIRE HYDRANT, B #1 STA. 4+95, 40' LT.

BENCHMARK: A-3 ELEV.: 242.45
CUT NAIL SET IN SOUTHEAST SIDE OF 8" MAPLE, B #2 STA. 0+20, 12' RT.

BENCHMARK: A-4 ELEV.: 239.40
CUT NAIL IN NORTHEAST SIDE OF TWIN 16" MAPLE, B #2 STA. 2+60, 15' LT.

BENCHMARK: A-5 ELEV.: 239.31
RAILROAD SPIKE SET IN WEST SIDE OF 18" WHITE OAK, B #2 STA. 3+50, 30' LT.



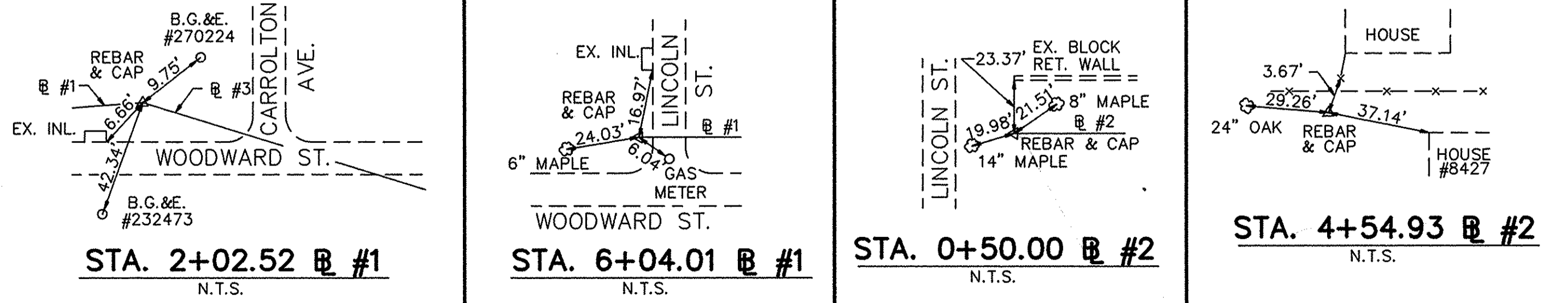
*NOTE: BG&E, ELECTRIC SUPPLY DIVISION TO BE NOTIFIED BY CONTRACTOR IF HE DESIRES BRACING OF EXISTING POLE #270224.

REMOVE AND RESET EXIST. CHAIN LINK FENCE TO TOP OF BANK OF PROPOSED DITCH STA. 3+93 TO STA. 4+63 LT. B #2.....70 LF

CONSTRUCT TYPICAL SWALE SECTION STA. 3+94 TO STA. 4+00 B #3.....125 L.F.

CONSTRUCT TYPICAL DITCH SECTION STA. 4+53 TO 3+81 B #2 STA. 2+63 TO 3+81 B #2

REFERENCES



PLAN

Scale: 1"=50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 3/24/98
DATE: 3/23/98

JOHN E. HARMS, JR. & ASSOCIATES, INC.
CONSULTING ENGINEERS
90 GOV. RITCHIE HIGHWAY
PASADENA, MARYLAND
301-647-6000



DES: D.M.D.	S.A.Q.	REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN	3/8/98
DRN: J.R.R.			
CHK: S.G.Z.			
DATE: 1/94	BY NO.	REVISION	DATE

600' SCALE MAP NO. 47 BLOCK NO. 11

PLAN

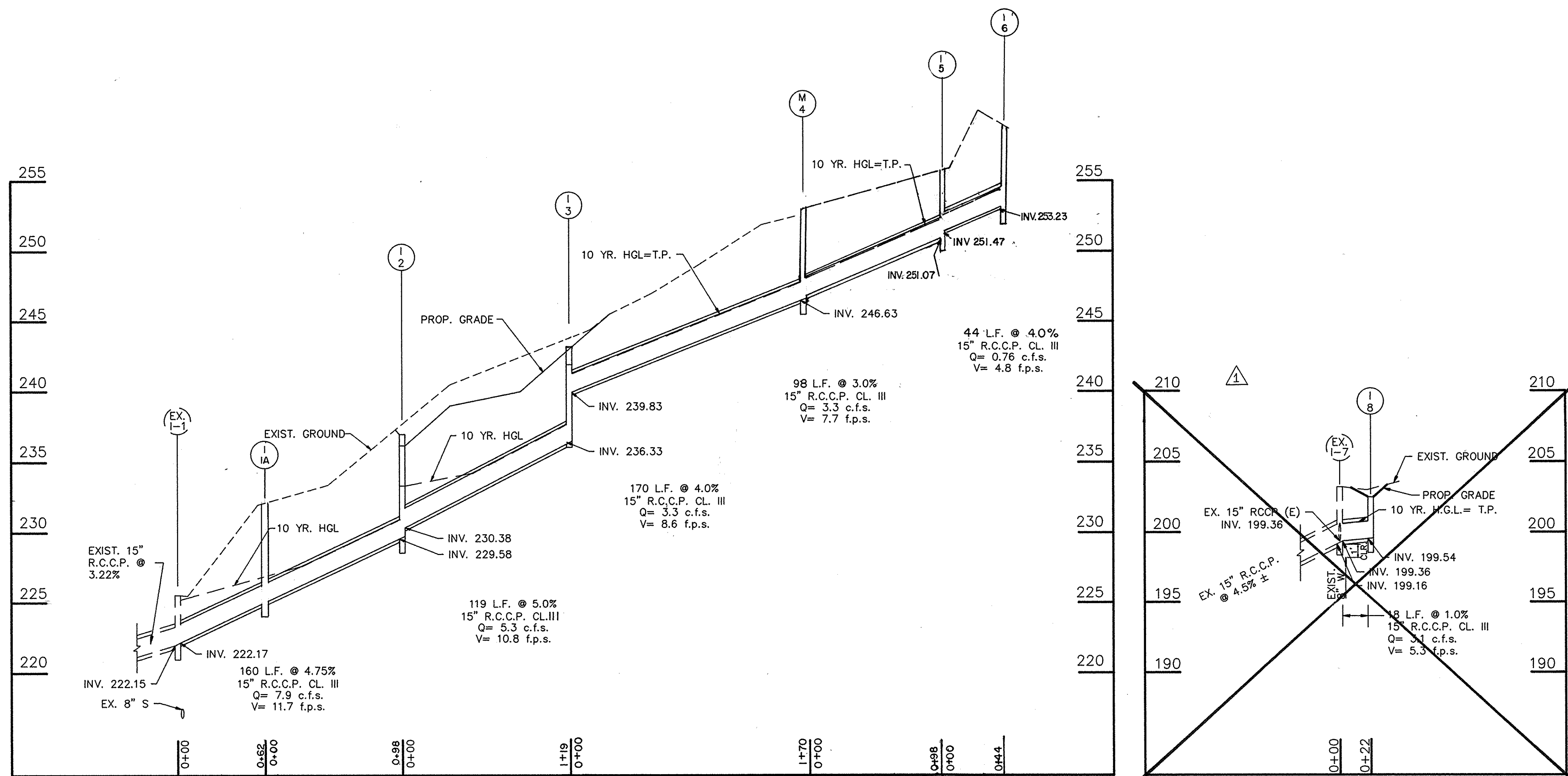
WOODWARD STREET

SCALE AS SHOWN
SHEET 5 OF 6

STRUCTURE SCHEDULE								
NO.	TYPE	BASELINE	STATION	OFFSET	TOP OF STRUCT.	INV. OUT	STANDARD	REMARKS
I-2	OPEN END GRATE INLET	#2	3+82	48' LT.	236.60	229.58	HO. CO. SD. 4.36	DOUBLE OPENING
I-3	'D' INLET	#2	2+70	53' LT.	242.40	236.33	HO. CO. SD. 4.11	
MH-4	4'-0" BRICK MH	#B	2+42	64' RT.	254.00	246.63	HO. CO. G 5.01	HO. CO. G-5.12 OPTIONAL
I-5	'S' INLET	#B	2+64	33' LT.	255.40	251.07	HO. CO. SD. 4.22	"S" GRATE
I-6	YARD INLET	#B	2+55	77' LT.	259.00	253.23	HO. CO. SD. 4.14	
I-8	'S' INLET	#4	0+85	5' LT.	202.50	199.54	HO. CO. SD. 4.22	"S" GRATE
I-IA	'S' INLET	#2	3+78	14' RT.	232.30	225.00	HO. CO. SD. 4.93	"S" GRATE

NOTE: HO.CO.SD. 4.37 PRECAST INLET MAY BE USED AS OPTION TO HO.CO.SD. 4.22

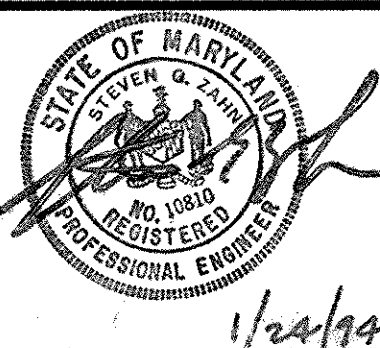
PIPE SCHEDULE				
FROM	TO	SIZE	TYPE	LENGTH
I-IA	I-2	15"	RCCP CL. III	98'
I-2	I-3	15"	RCCP CL. III	119'
I-3	MH-4	15"	RCCP CL. III	170'
MH-4	I-5	15"	RCCP CL. III	98'
I-5	I-6	15"	RCCP CL. III	44'
EX. I-7	I-8	15"	RCCP CL. III	18'
EX. I-1	I-IA	15"	RCCP CL. III	62'



STORM DRAIN PROFILES
SCALE: 1"=50' HORIZ.
1"=5' VERT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
3/26/98
3/24/98
3/23/98

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DES: D.M.D. S.A.Q. 3/18/98
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REMOVAL OF UNNECESSARY SEDIMENT CONTROLS AND STORM DRAIN
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STORM DRAIN PROFILES SCHEDULES

WOODWARD STREET

600' SCALE MAP NO. 47 BLOCK NO. 11

SCALE AS SHOWN
SHEET 6 OF 6