

SECTION TWO
 LOTS 10-24
MATHIS PROPERTY
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER:
 WILLARD & QUINNIE MATHIS
 12392-A FREDERICK ROAD
 WEST FRIENDSHIP, MARYLAND 21794
 (301) 489-4024

DEVELOPER:
 BARNARD BROTHERS CONSTRUCTION CO., INC.
 1035 St. MICHEALS ROAD
 MT. AIRY, MARYLAND 21771
 (301) 489-7621

ENGINEER:
 SHELADIA ASSOCIATES, INC.
 310 SOUTH MAIN STREET
 MT. AIRY, MARYLAND 21771
 (301) 829-2890

- 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.C.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 construction of the main.
 6. For details not shown on the drawings use Howard County Standard Details.
 7. For materials and construction methods use Howard County Standard Specifications.
 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 Electric Distribution Customer Service - 685-0123
 - Baltimore Gas & Electric Company - Underground Gas Distribution Customer Service - 685-0123
 - Engineering - "Damage Control" - 234-5621
 - "Miss Utility" - 1-559-0100
 - Cheapeake & Potomac (C&P) Telephone Company - 725-9976
 - American Telephone and Telegraph - Cable Location Division - 393-3553
 - Colonial Pipeline Company - 795-1390
 - Bureau of Utilities Howard County - 992-2366
 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 Engineer. Payment for such removal shall be included in the unit price bid for construction of the main.
 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.

I, HEREBY CERTIFY THAT THESE PLANS OF CONSTRUCTION HAVE BEEN PREPARED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.

Sourabh G. Munshi
 SOURABH G. MUNSHI, PROF. ENG. # 10,539

10/20/87
 DATE



NOTE:
 AS-BUILT SURVEY CERTIFIED
 BY SOURABH G. MUNSHI P.E. No. 10,539
 OCTOBER 20, 1988

IMPROVEMENT PLANS INDEX

- SHEET 1: COVER SHEET
- SHEET 2: STREET PLAN AND PROFILE FOR BARNARD WAY
- SHEET 3: GRADING AND DRAINAGE PLAN
- SHEET 4: GRADING AND SEDIMENT CONTROL PLAN
- SHEET 5: DRAINAGE AREA MAP & CONSTRUCTION DETAILS

DATE	REVISION
1/6/88	PER COMMENTS
2/19/88	PER COMMENTS

DEPARTMENT OF PUBLIC WORKS
 APPROVED FOR STORM DRAINAGE & PUBLIC ROADS
 3-14-88
 DATE
William E. P. Day
 CHIEF, BUREAU OF ENGINEER

HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 APPROVED:
 3-22-88
 DATE
Joseph T. ...
 DIVISION OF ...

DEPARTMENT OF PUBLIC WORKS
 APPROVED FOR STORM DRAINAGE & PUBLIC ROADS
 3/14/88
 DATE
Franklin W. Welland
 CHIEF, BUREAU OF HIGHWAYS
 3-11-88
 DATE
...
 CHIEF, LAND DEVELOPMENT DIVISION

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAYMENT MATERIALS	
		FULL DEPTH BIT. CONC. ALTERNATE	GRANULAR BASE ALTERNATES
P-2	RESIDENTIAL ZONES	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE
	LOCAL DRIVEWAYS, STS. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY*	8" CRUSHER RUN BASE COURSE 12 COURSES 1 OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	PRIME 8" CRUSHER RUN BASE COURSE 12 COURSES 1 OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE

- NOTES:
- ROAD CLASSIFICATION: LOCAL
 - MINIMUM DESIGN SPEED: 30 MPH.
 - A MINIMUM OF 210 FEET OF SIGHT DISTANCE IS REQUIRED TO BE PROVIDED ALONG ALL VERTICAL CURVES.

DEPARTMENT OF PUBLIC WORKS
APPROVED FOR STORM DRAINAGE & PUBLIC ROADS

3-11-88
DATE

HOWARD COUNTY OFFICE OF PLANNING AND ZONING
APPROVED:

DATE

DEPARTMENT OF PUBLIC WORKS
APPROVED FOR STORM DRAINAGE & PUBLIC ROADS

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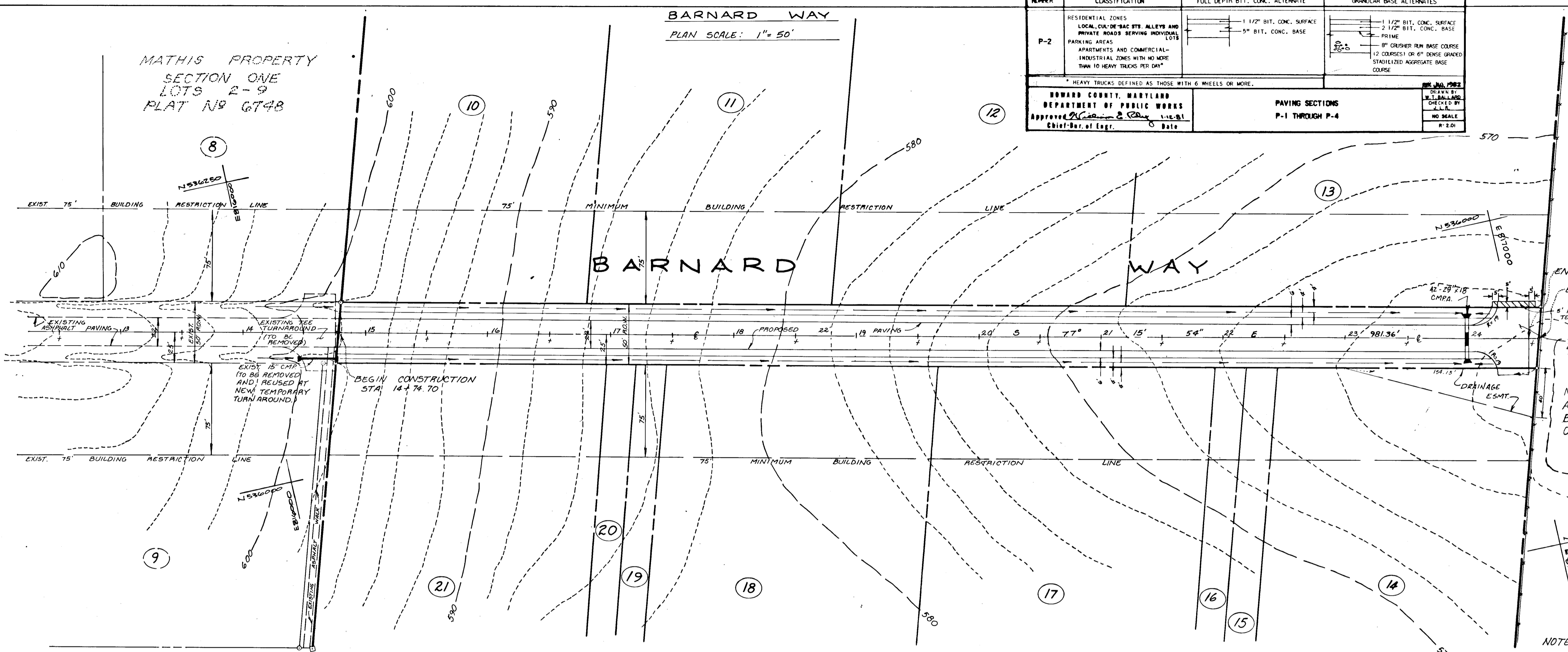
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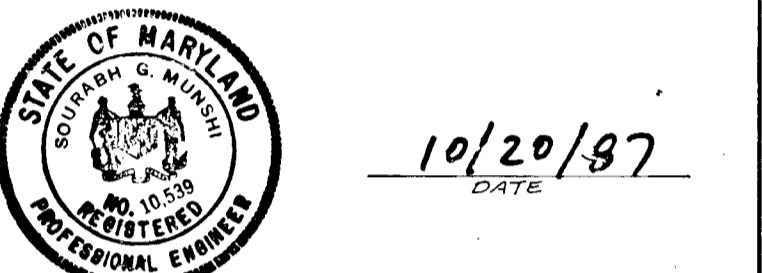
DATE



END PAVING, STA 24+50
END CONSTRUCTION, STA 24+58.49
5' REVERSIBLE EASEMENT FOR TEMPORARY TEE TURN-AROUND.
TEMPORARY TEE TURN-AROUND (DETAIL R 5.05, SEE SHEET 5 ACCORDING TO DETAIL R 5.06 (SEE SHEET 5)).

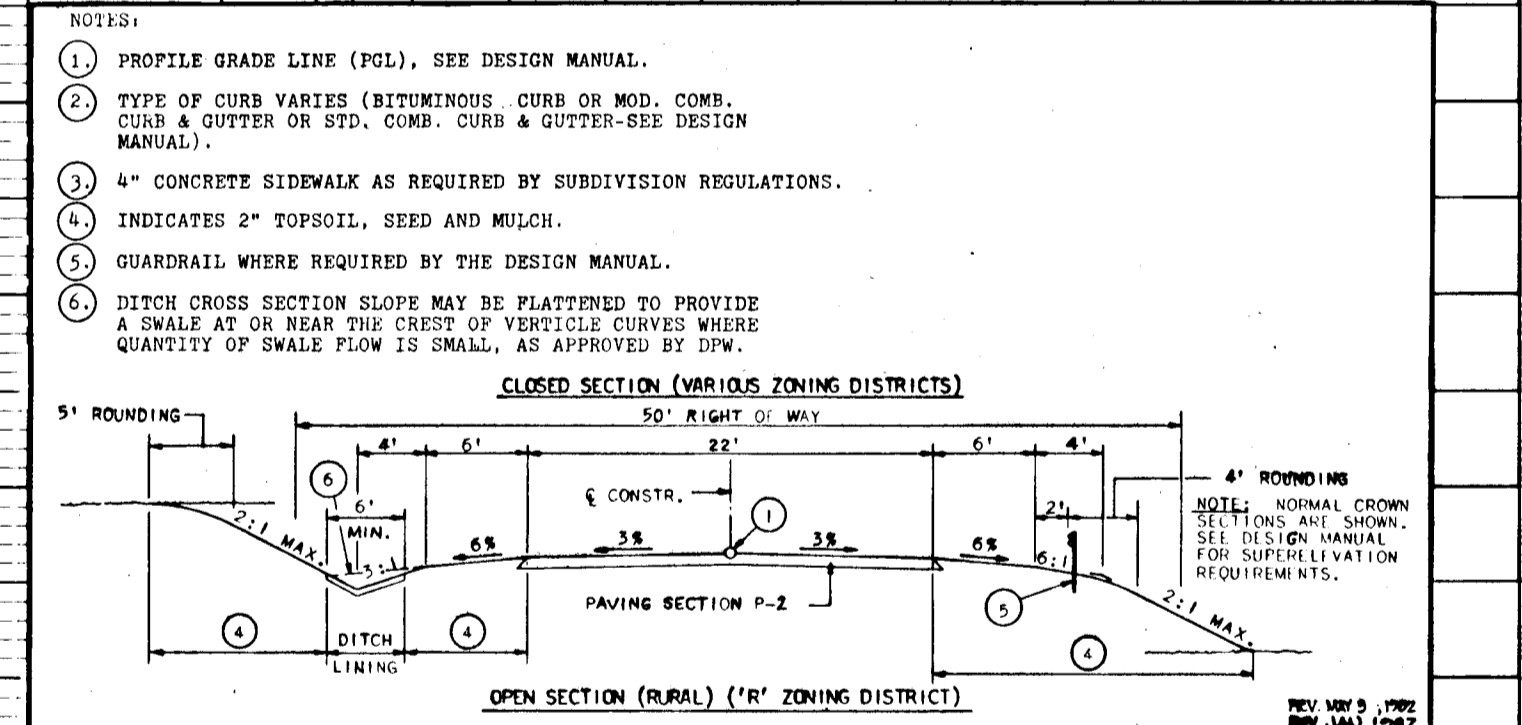
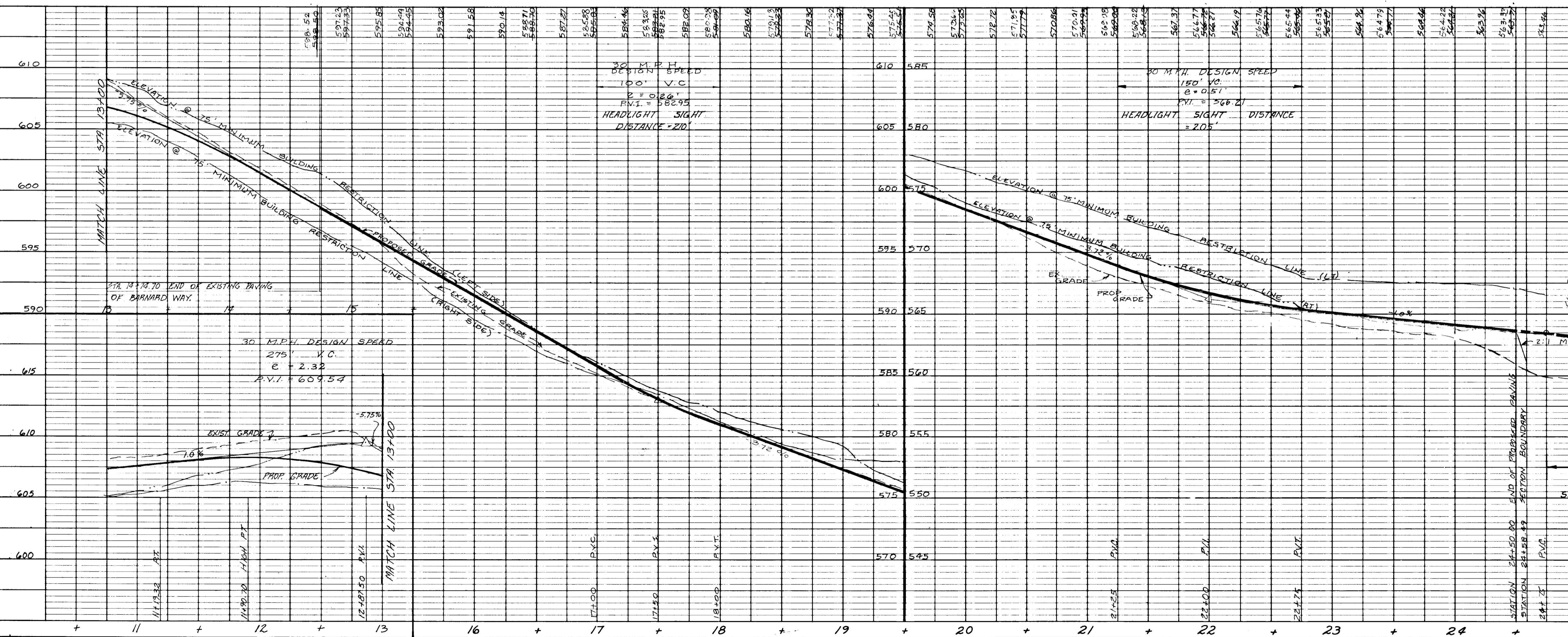
NOTE
AS-BUILT SURVEY CERTIFIED
BY SOURABH G. MUNSHI P.E. No. 10,539
OCT. 20, 1988
R.W. TENNANT
655/281

Sourabh Munshi
SOURABH G. MUNSHI P.E. # 10539

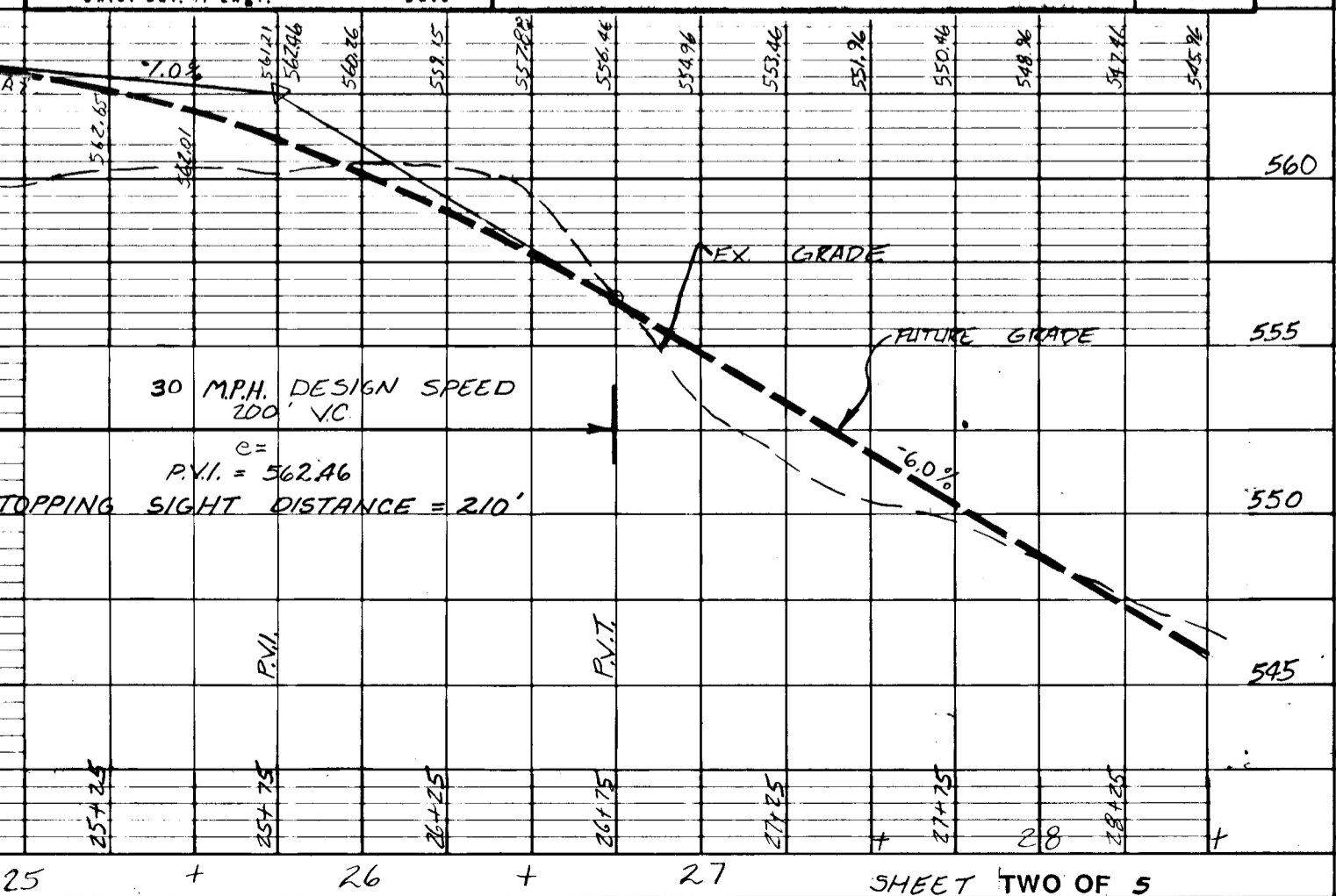


STREET PLAN & PROFILE
BARNARD WAY
STA. 14+77.13 TO STA. 24+58.49
SECTION II
MATHIS PROPERTY
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN OCT. 1987

NOTE: FOR BENCHMARK LOCATION AND ELEVATION, SEE DRAINAGE AREA MAP - SHEET 5 OF 5.

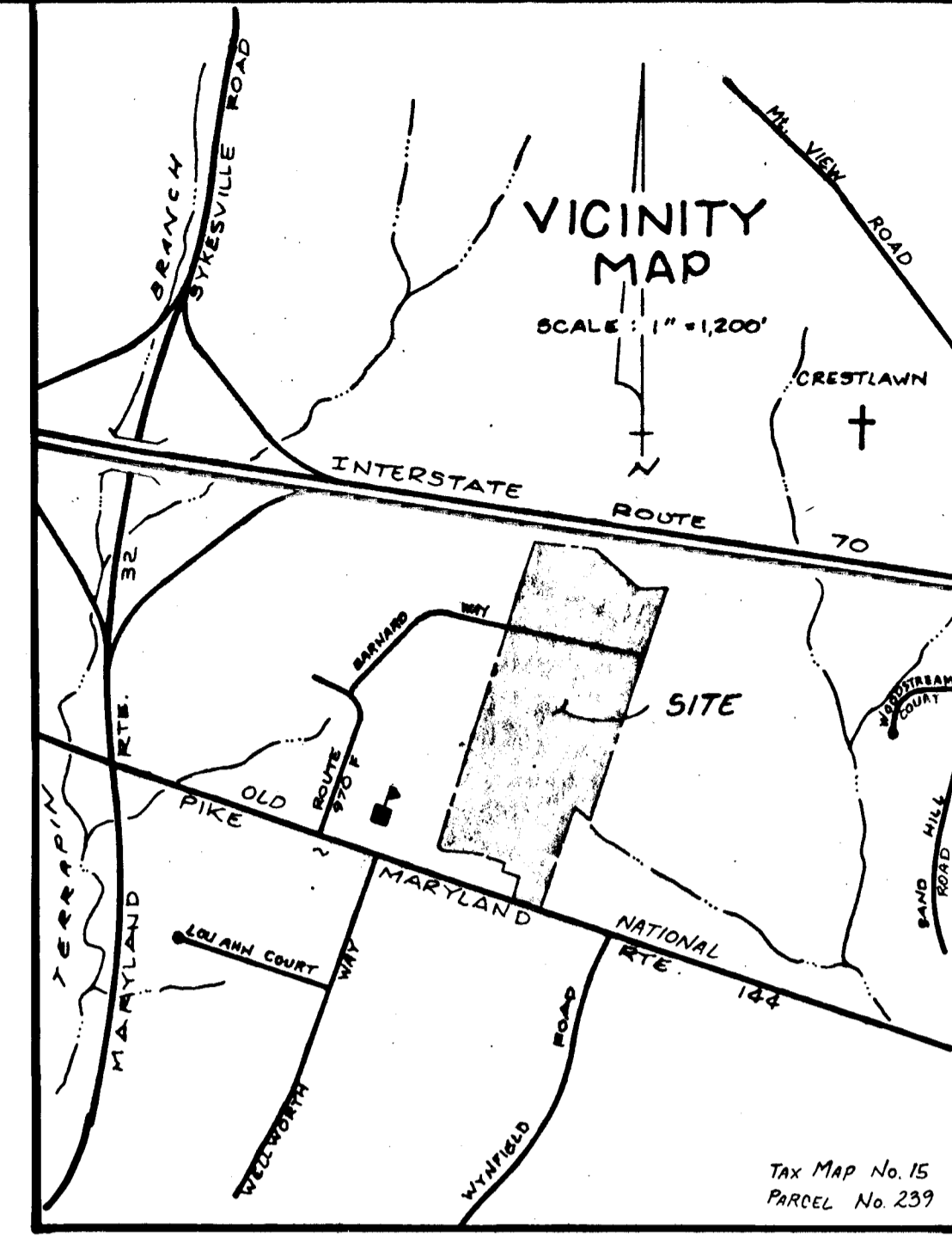


HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
APPROVED: *[Signature]*
DATE



PLAN
NO. 1168

PROFILE
NO. 1168



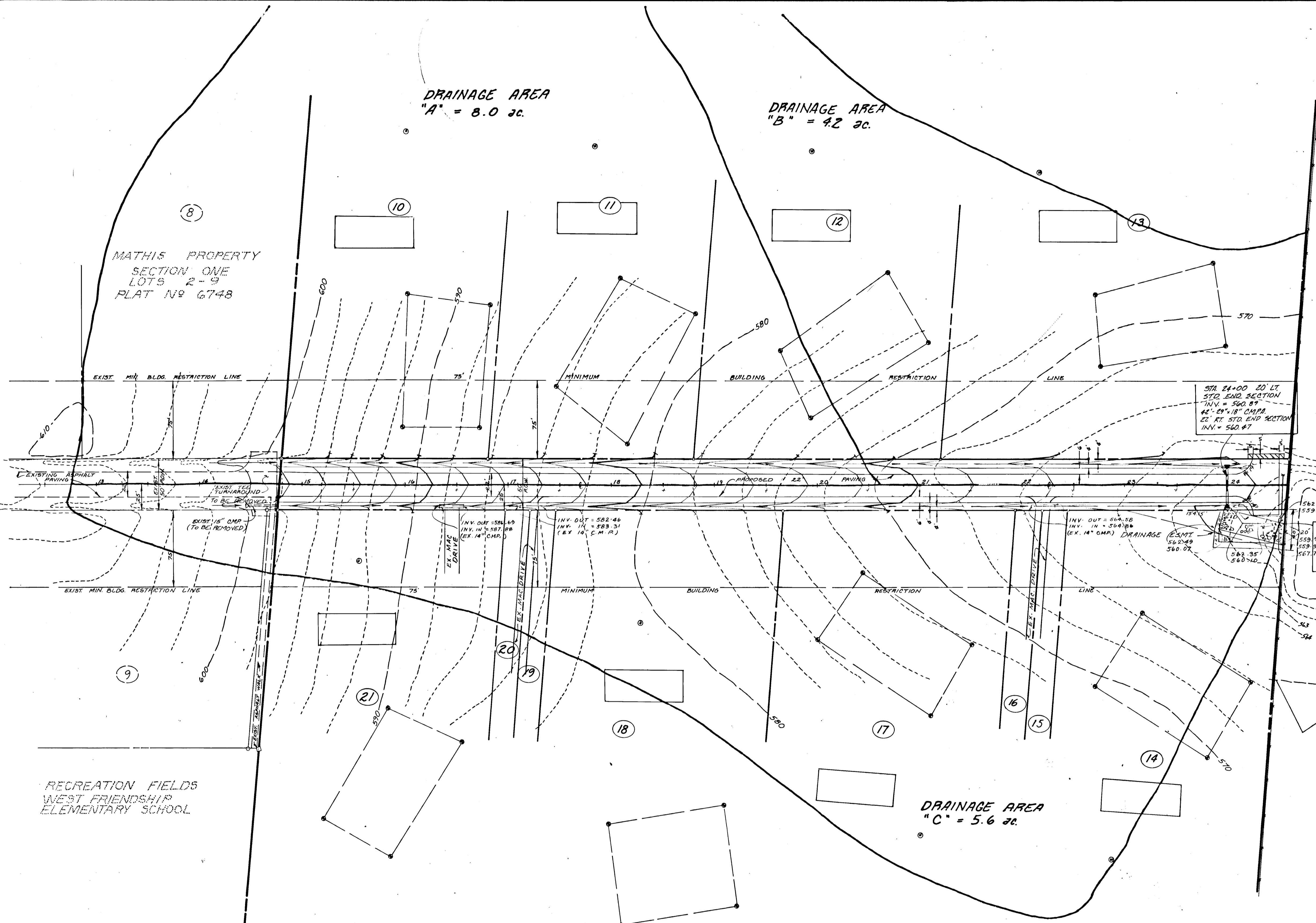
DRAINAGE AREA
"A" = 8.0 ac.

DRAINAGE AREA
"B" = 4.2 ac.

DRAINAGE AREA
"C" = 5.6 ac.

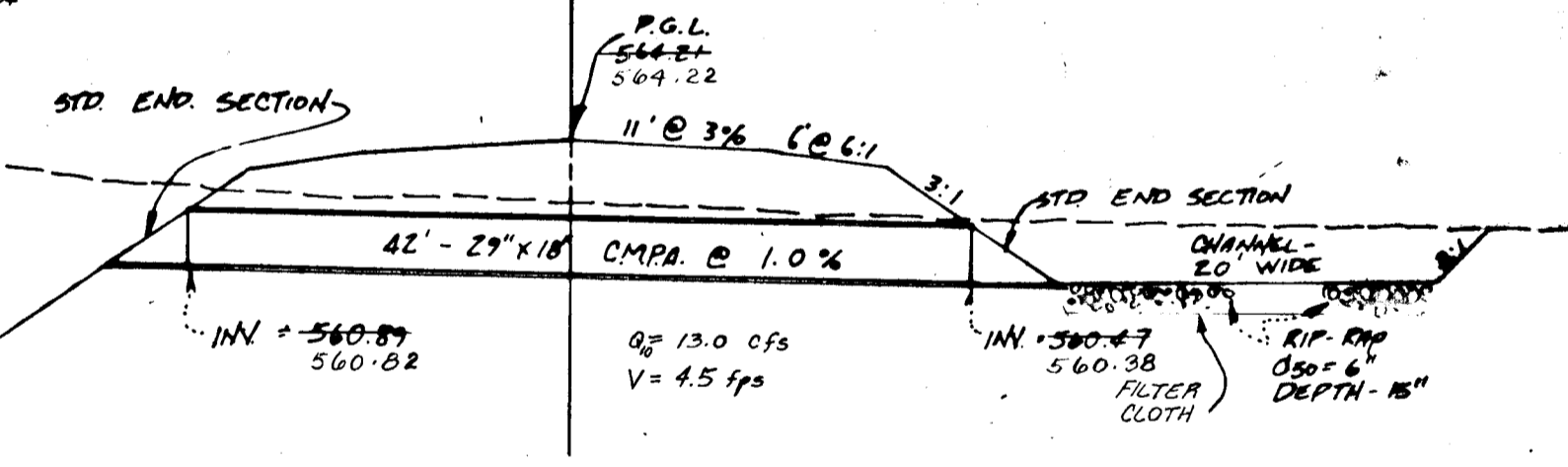
MATHIS PROPERTY
SECTION ONE
LOTS 2-9
PLAT No 6748

RECREATION FIELDS
WEST FRIENDSHIP
ELEMENTARY SCHOOL



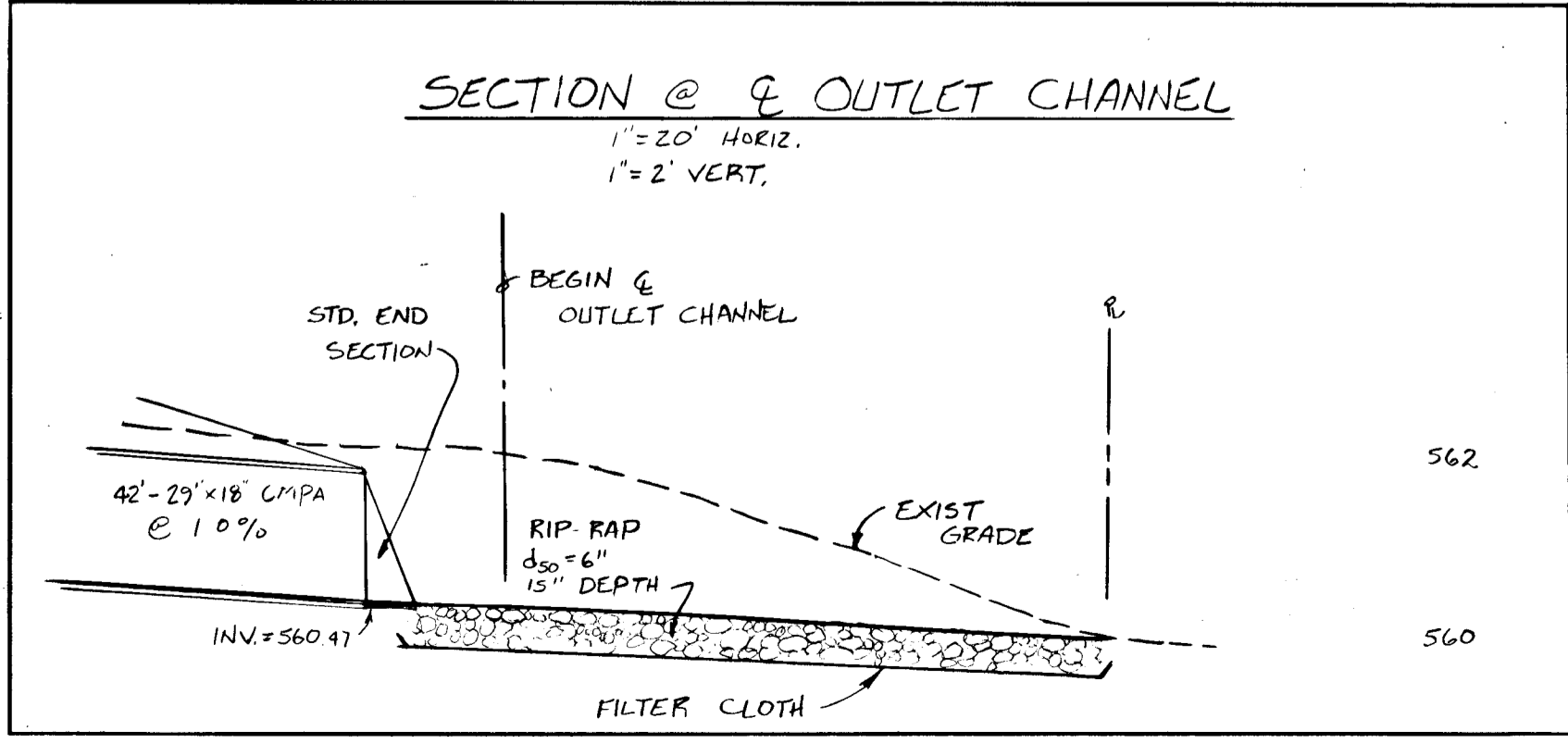
TRAPEZOIDAL OUTLET CHANNEL
20' WIDE W/2:1 SIDE SLOPES
PROVIDE 6" RIP RAP
DEPTH = 15"

R.W. TENNANT
655/281



SECTION OF 29" x 18" CMPA
STA. 24+00
SCALE: 1" = 10' HORIZ.
1" = 5' VERT.

GRADING AND DRAINAGE PLAN
MATHIS PROPERTY
LOTS 10-24, SECTION 2
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
TAX MAP #15, PARCEL #239
SCALE: 1" = 50'. OCTOBER 1987



NOTE:
AS-BUILT SURVEY CERTIFIED
BY SOURABH G. MUNSHI P.E. No. 10,539
OCTOBER 10, 1988

DEPARTMENT OF PUBLIC WORKS
APPROVED FOR STORM DRAINAGE & PUBLIC ROADS
3/14/88 *Shawelle W. Ullmann*
DATE CHIEF, BUREAU OF HIGHWAYS
3/18/88 *Sourabh G. Munshi*
DATE ENGR., LAND DEVELOPMENT DIV.
Sourabh G. Munshi 10/20/87
PROFESSIONAL ENGINEER No. 10539

DEPARTMENT OF PUBLIC WORKS
APPROVED FOR STORM DRAINAGE & PUBLIC ROADS
3-14-88 *Shawelle W. Ullmann*
DATE CHIEF, BUREAU OF HIGHWAYS
HOWARD COUNTY OFFICE OF PLANNING AND ZONING
APPROVED:
3/23/88 *Sourabh G. Munshi*
DATE CHIEF, COUNTY PLANNING AND ZONING DEPARTMENT



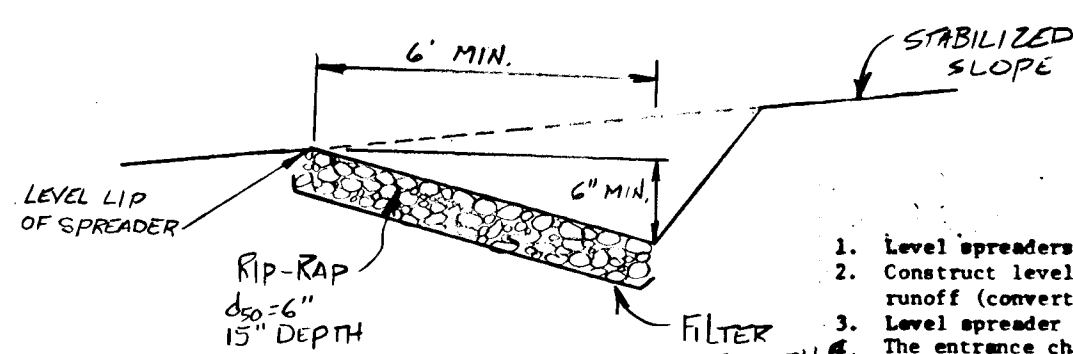
JOB No 251-379
SHEET No 3 of 5

B911

Required Sequence of Construction

1. Obtain necessary permits.
2. Notify required inspection offices 24 hours prior to starting any construction.
3. Install 29" x 18" c.m.p. @ sta. 24+00; construct outlet channel.
4. Install sediment control measures and structures.
5. Clear and grub site.
6. Install Storm Drainage Structures.
7. Rough grade site.
8. Install street paving and walks.
9. Finish grade site.
10. Install finish ditch linings and treatments.
11. Stabilize all disturbed areas in accordance with permanent seeding specification.
12. Phase out the sediment trap as uphill areas are permanently stabilized.
13. Upon Approval of The Howard County Sediment Control Inspector, all sediment control devices shall be removed and all disturbed areas to be seeded and mulched per Permanent Seeding Specifications.

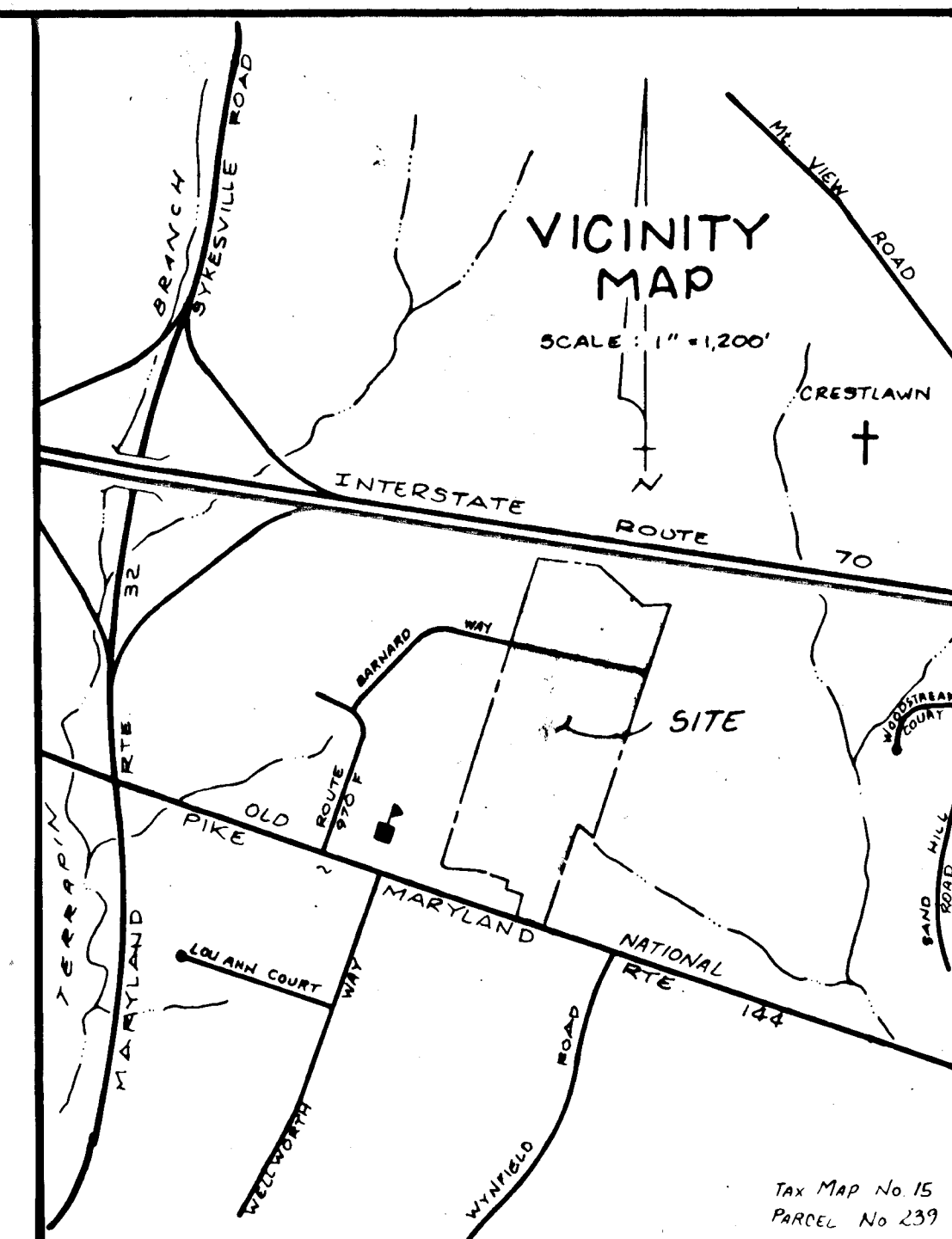
LEVEL SPREADER SECTION N.T.S.



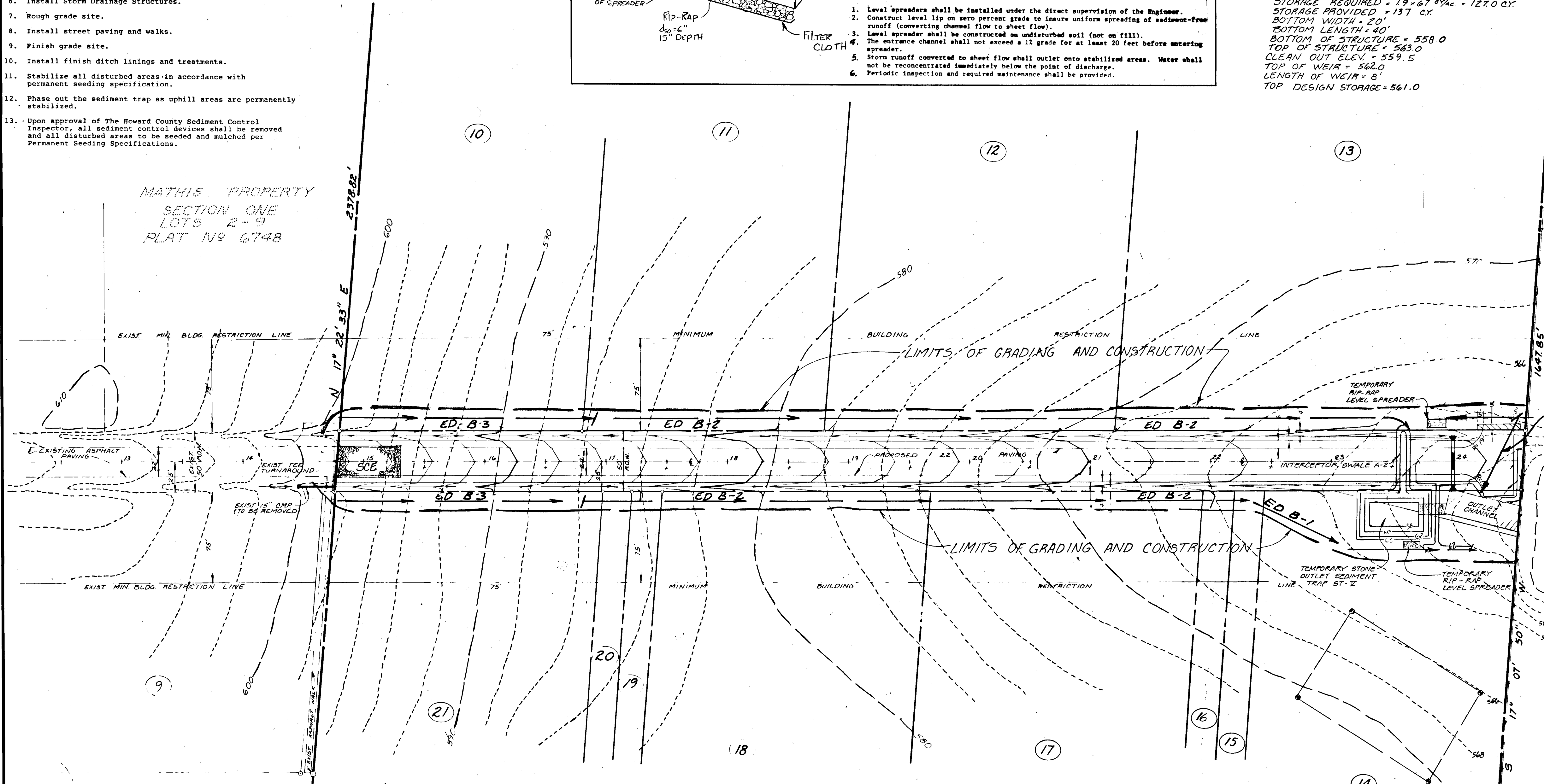
Construction Specifications

1. Level spreaders shall be installed under the direct supervision of the Engineer.
2. Construct level lip on zero percent grade to insure uniform spreading of sediment-free runoff (converting channel flow to sheet flow).
3. Level spreader shall be constructed on undisturbed soil (not on fill).
4. The entrance channel shall not exceed a 1% grade for at least 20 feet before entering spreader.
5. Storm runoff converted to sheet flow shall outlet onto stabilized areas. Water shall not be reconcentrated immediately below the point of discharge.
6. Periodic inspection and required maintenance shall be provided.

STONE OUTLET SEDIMENT TRAP
 DRAINAGE AREA = 1.9 AC.
 STORAGE REQUIRED = 1.9 x .67 cu. yd. = 1.270 CY.
 STORAGE PROVIDED = 1.37 CY.
 BOTTOM WIDTH = 20'
 BOTTOM LENGTH = 40'
 BOTTOM OF STRUCTURE = 558.0
 TOP OF STRUCTURE = 563.0
 CLEAN OUT ELEV. = 559.5
 TOP OF WEIR = 562.0
 LENGTH OF WEIR = 8'
 TOP DESIGN STORAGE = 561.0



MATHIS PROPERTY
 SECTION ONE
 LOTS 2-9
 PLAT NO 6748



RECREATION FIELDS
 WEST FRIENDSHIP
 ELEMENTARY SCHOOL

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 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.
- 5) 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.
- 6) 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 5094 Acres
 Area Disturbed 1.9 Acres
 Area to be roofed or paved 0.5 Acres
 Area to be vegetatively stabilized 1.4 Acres
 Total Fill 420 Cu. yds
 Total Cut 600 Cu. yds
 Offsite waste/borrow area location N/A
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

Vegetative Specifications and Notes

1. Disturb as small an area of the present cover as possible while performing grading.
2. Limit duration of exposure of bare earth from grading operation to 7 days by the establishment of temporary vegetation (or mulching if appropriate) or by completing permanent seeding within 14 days.
3. Establish permanent vegetative cover immediately after final grading is completed. (This includes all grading on or off this site that is affected by this construction.) If final grading is completed at a time other than the seeding season, a temporary ground cover such as mulching will be used to stabilize the bare soil.
4. Recommended temporary seed mixture:
 Seed: Annual Ryegrass at 40 lbs. per acre
 Lime: 1 1/2 tons ground limestone per acre
 Fertilizer: 10-20-10 at 600 lbs. per acre
 Mulch: Straw at 1.5 tons per acre
5. Recommended permanent seed mixture:
 Seed: Ky. 31 Fescue at 60 lbs. per acre
 Lime: 1 1/2 tons ground limestone per acre
 Fertilizer: Straw at 1.5 tons per acre
 Asphalt: SS-1 or equivalent at 218 gal. per acre
6. All points of construction ingress and egress shall be protected by 50 ft. (linear) of crushed stone to prevent tracking of mud onto Public Roads.
7. Following initial soil disturbance or redistribution, permanent or temporary stabilization (specified on plans) shall be completed within seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days as to all other disturbed or graded areas on the project site.
8. Temporary and permanent topsoil, seed and sod materials and installation shall conform to the specifications of the Howard County Design Manual.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed 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 24 bushel 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 1/4 to 2 tons per acre and 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 EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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, discing or other acceptable means before seeding, if not previously loosened.
 Soil Amendments: Use 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 1000 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 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 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 1/4 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.

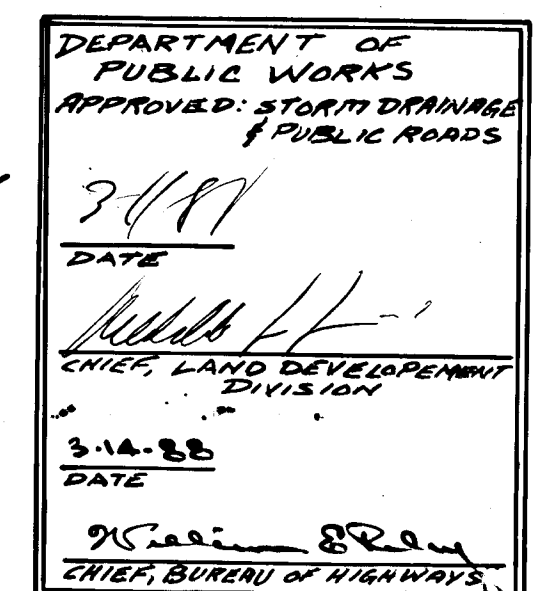
Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

Developer(s):
 "I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."
 Gary M. Barnard 10/21/87 Date

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 Conservation District."
 Sushash Muneer 10/25/87 DATE
 SUSHASH C. MUNEER
 PROFESSIONAL ENGINEER NO 10,539



GRADING AND SEDIMENT CONTROL PLAN
MATHIS PROPERTY
 LOTS 10-24, SECTION 2
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 TAX MAP #15, PARCEL # 239
 SCALE: 1" = 50'
 OCTOBER 1987



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT
 Stephen Z. Rubin 3/2/88
 HOWARD COUNTY S.C.D. DATE

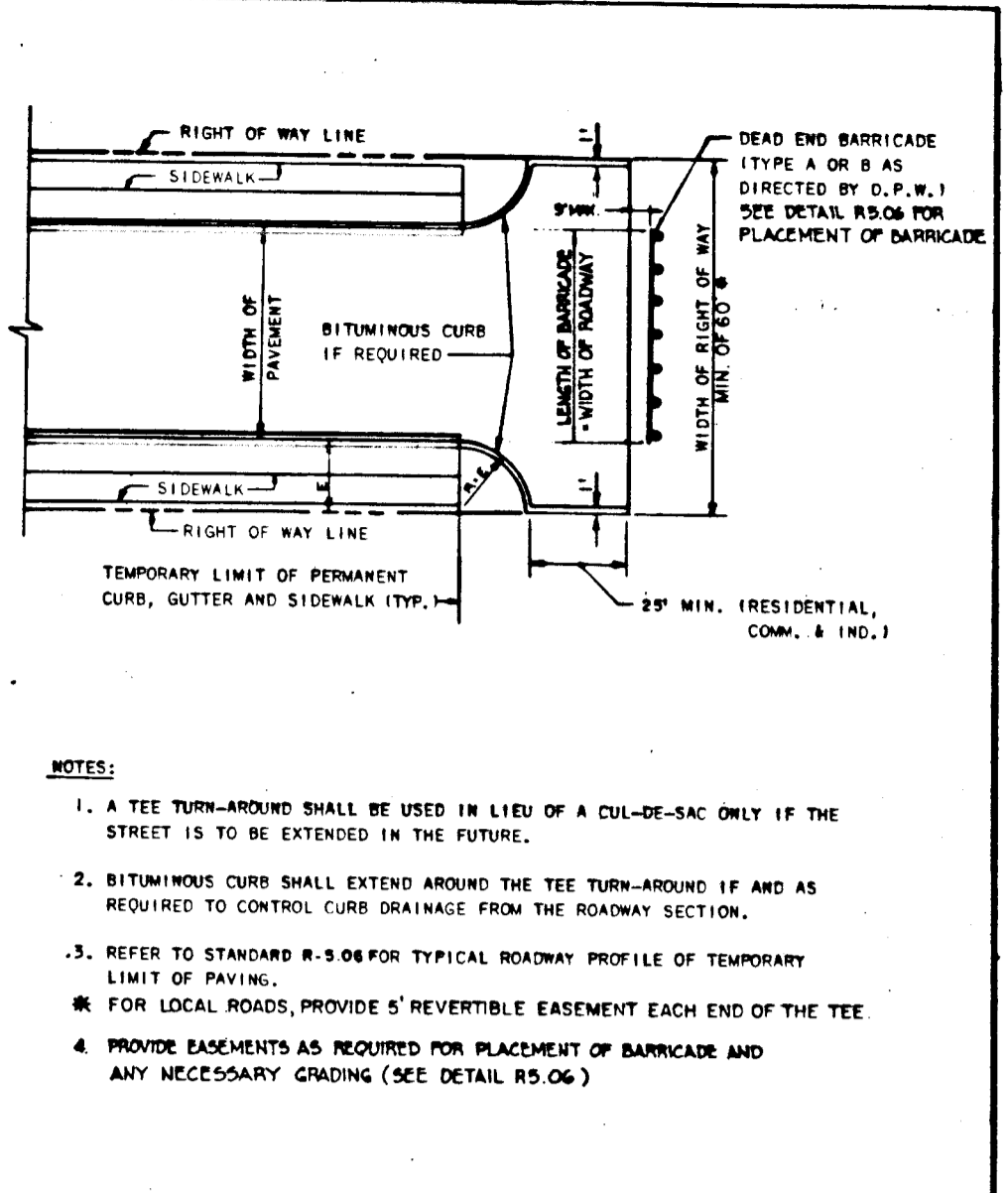
DEPARTMENT OF PUBLIC WORKS
 APPROVED FOR STORM DRAINAGE & PUBLIC ROADS
 3/14/88
 J. W. WELLS
 CHIEF, BUREAU OF HIGHWAYS

Reviewed for HOWARD COUNTY S.C.D. and meets Technical Requirements.
 J. Helms 3/19/88
 U.S. Soil Conservation Service DATE

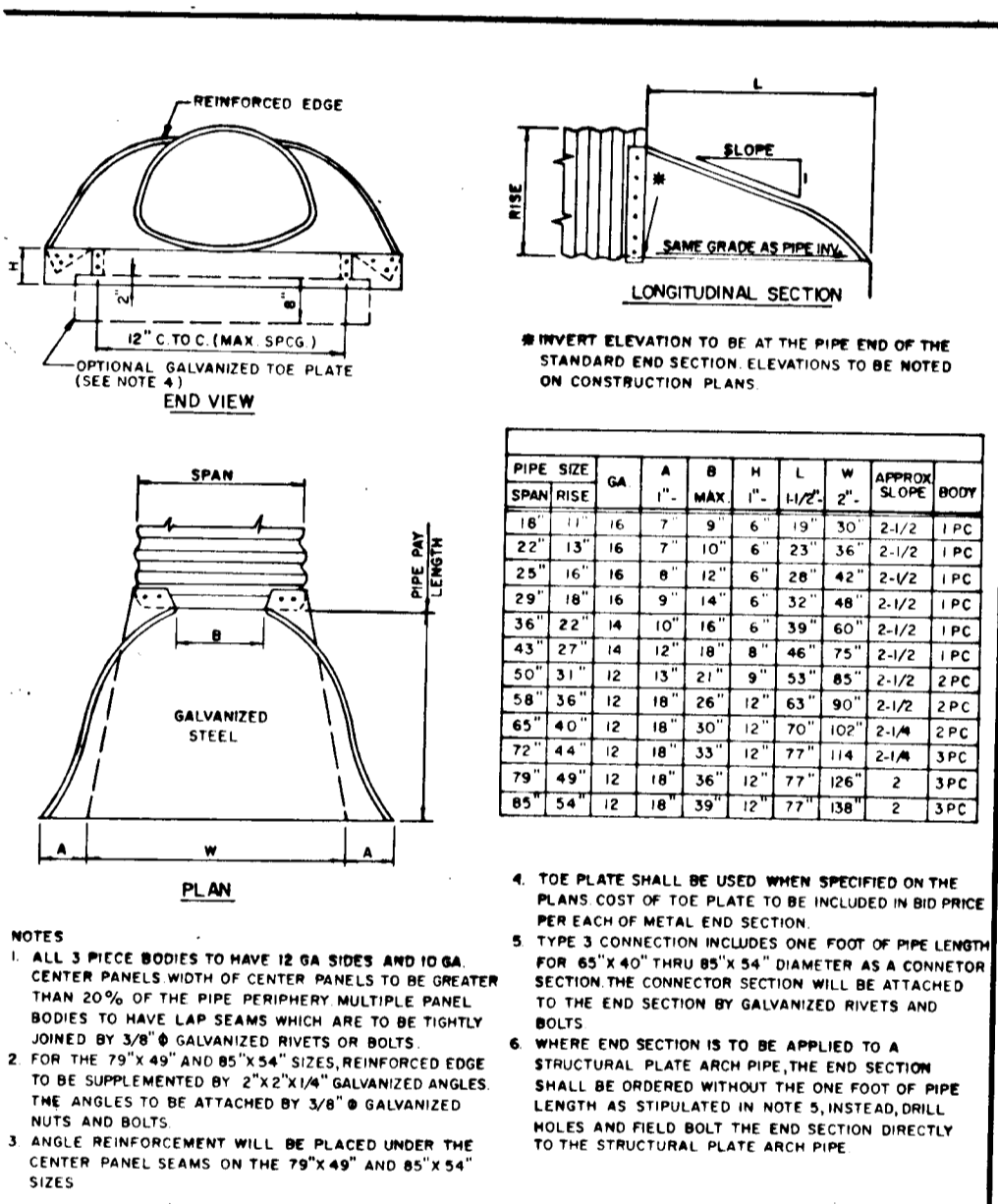
HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 APPROVED
 3/23/88
 J. W. WELLS
 CHIEF, BUREAU OF HIGHWAYS

JOB NO 251-379
 SHEET NO 4 OF 5

1168

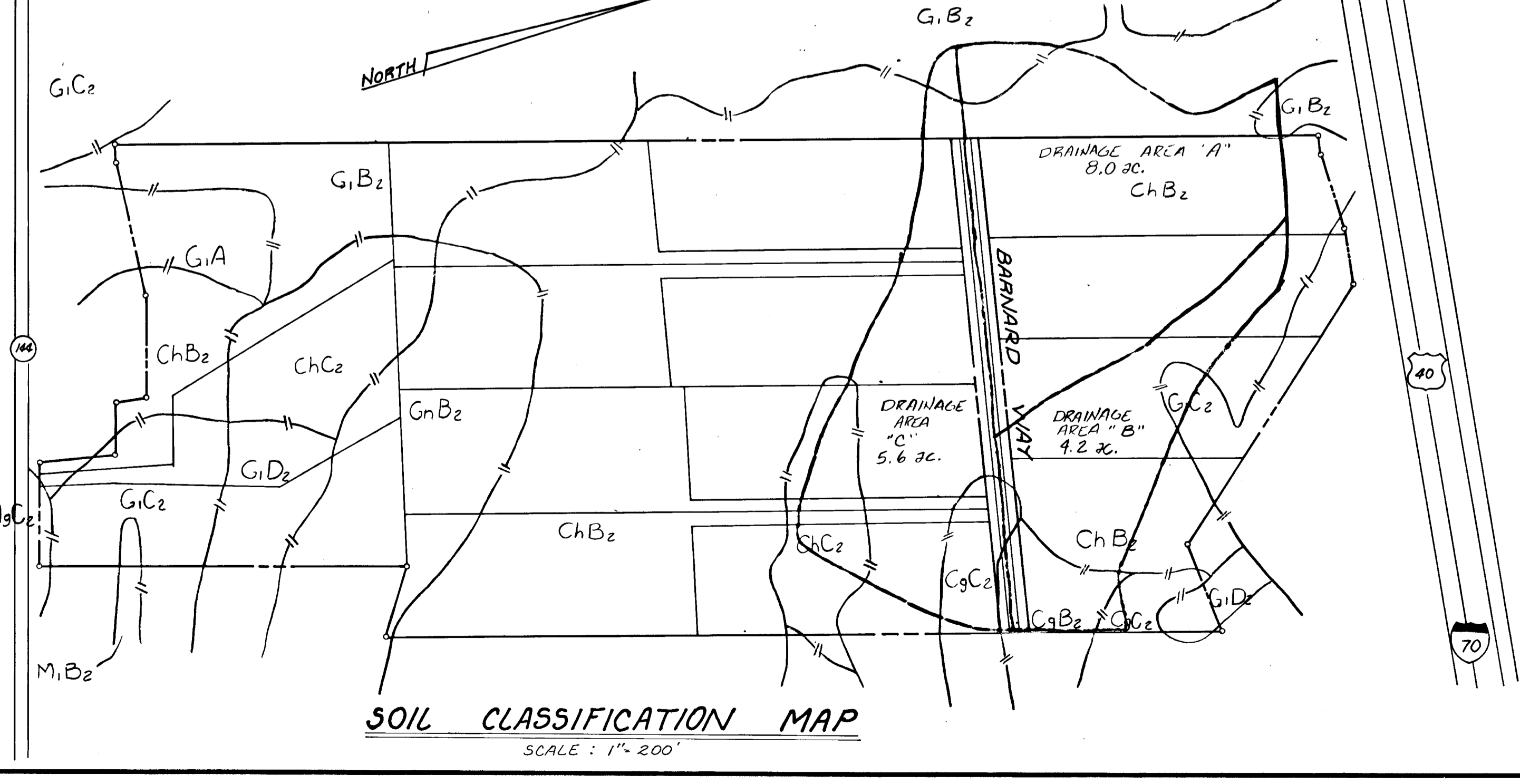


NOTES:
 1. A TEE TURN-AROUND SHALL BE USED IN LIEU OF A CUL-DE-SAC ONLY IF THE STREET IS TO BE EXTENDED IN THE FUTURE.
 2. BITUMINOUS CURB SHALL EXTEND AROUND THE TEE TURN-AROUND IF AND AS REQUIRED TO CONTROL CURB DRAINAGE FROM THE ROADWAY SECTION.
 3. REFER TO STANDARD R-508 FOR TYPICAL ROADWAY PROFILE OF TEMPORARY LIMIT OF PAVING.
 4. FOR LOCAL ROADS, PROVIDE 5' REVERTIBLE EASEMENT EACH END OF THE TEE.
 5. PROVIDE EASEMENTS AS REQUIRED FOR PLACEMENT OF BARRICADE AND ANY NECESSARY GRADING (SEE DETAIL R5.06)

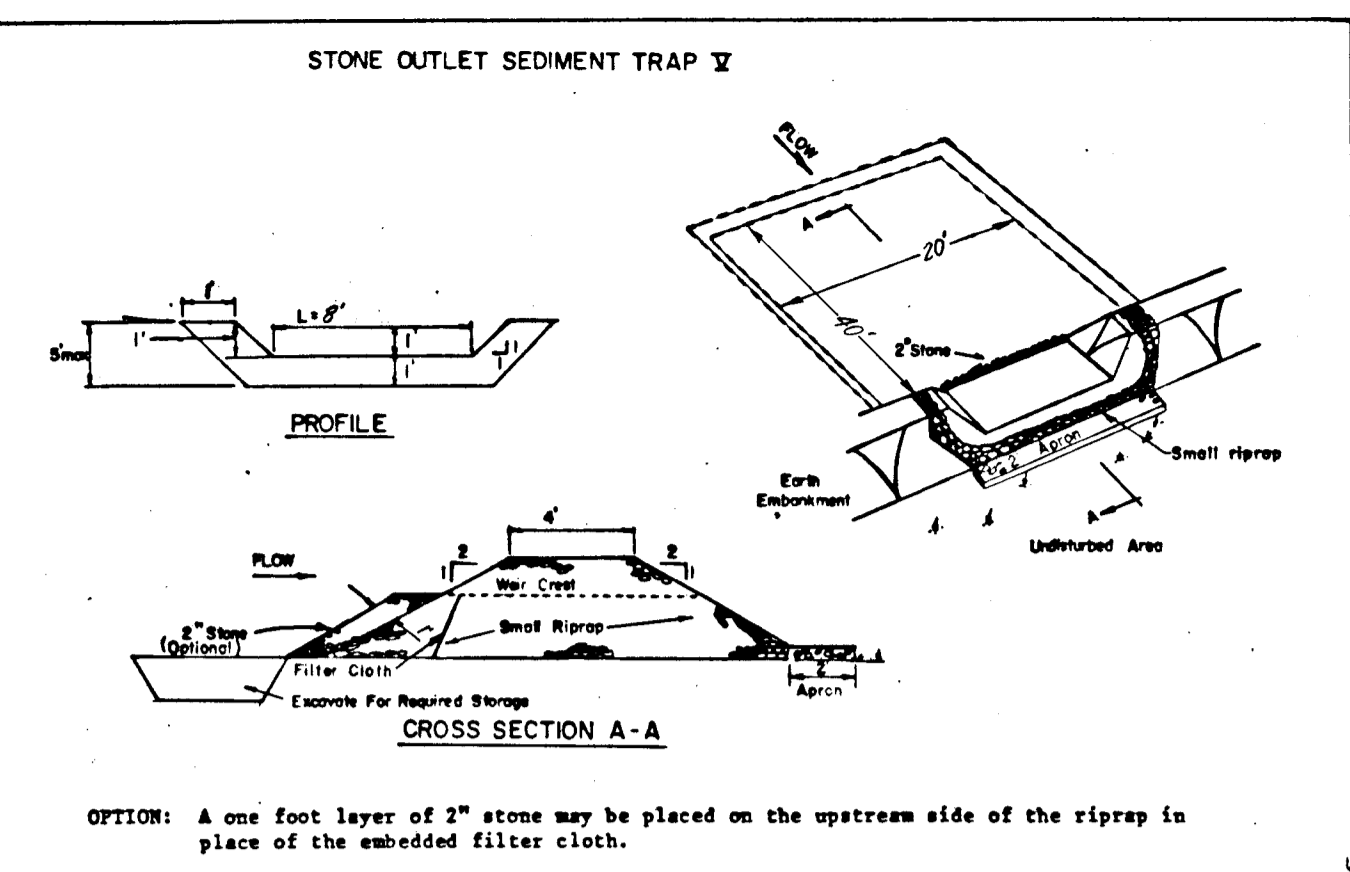


NOTES:
 1. ALL 3 PIPE BODIES TO HAVE 12 SIDES AND 10-16 CENTER PANELS WITH CENTER PANELS TO BE GREATER THAN 20% OF THE PIPE PERIMETER MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY 3/8" GALVANIZED WELDS OR BOLTS.
 2. FOR THE 78" AND 84" SIZES, REINFORCED ENDS TO BE SUPPLEMENTED BY 2"x2" GALVANIZED ANGLES THE ANGLES TO BE ATTACHED BY 3/8" GALVANIZED NUTS AND BOLTS.
 3. ANGLE REINFORCEMENT WILL BE PLACED UNDER THE CENTER PANEL SEAMS ON THE 78" AND 84" SIZES.
 4. TIE PLATE SHALL BE USED WHEN SPECIFIED ON THE PLANS COST OF TIE PLATE TO BE INCLUDED IN BID PRICE PER EACH OF METAL END SECTION.
 5. TIE 3 CONNECTION INCLUDES ONE FOOT OF PIPE LENGTH FOR 84" AND 78" THROUGH 84" DIAMETER AS A CONECTOR TO THE END SECTION OF GALVANIZED RIVETS AND BOLTS.
 6. WHERE END SECTION IS TO BE APPLIED TO A STRUCTURAL PLATE ARCH PIPE, THE END SECTION SHALL BE ORDERED WITHOUT THE ONE FOOT OF PIPE LENGTH AS STIPULATED IN NOTE 5, INSTEAD, DRILL HOLES AND FIELD BOLT THE END SECTION DIRECTLY TO THE STRUCTURAL PLATE ARCH PIPE.

FOR STANDARD CONNECTIONS - STANDARD END SECTIONS - SEE DETAIL 5D-5.62 H.C.D.P.W.



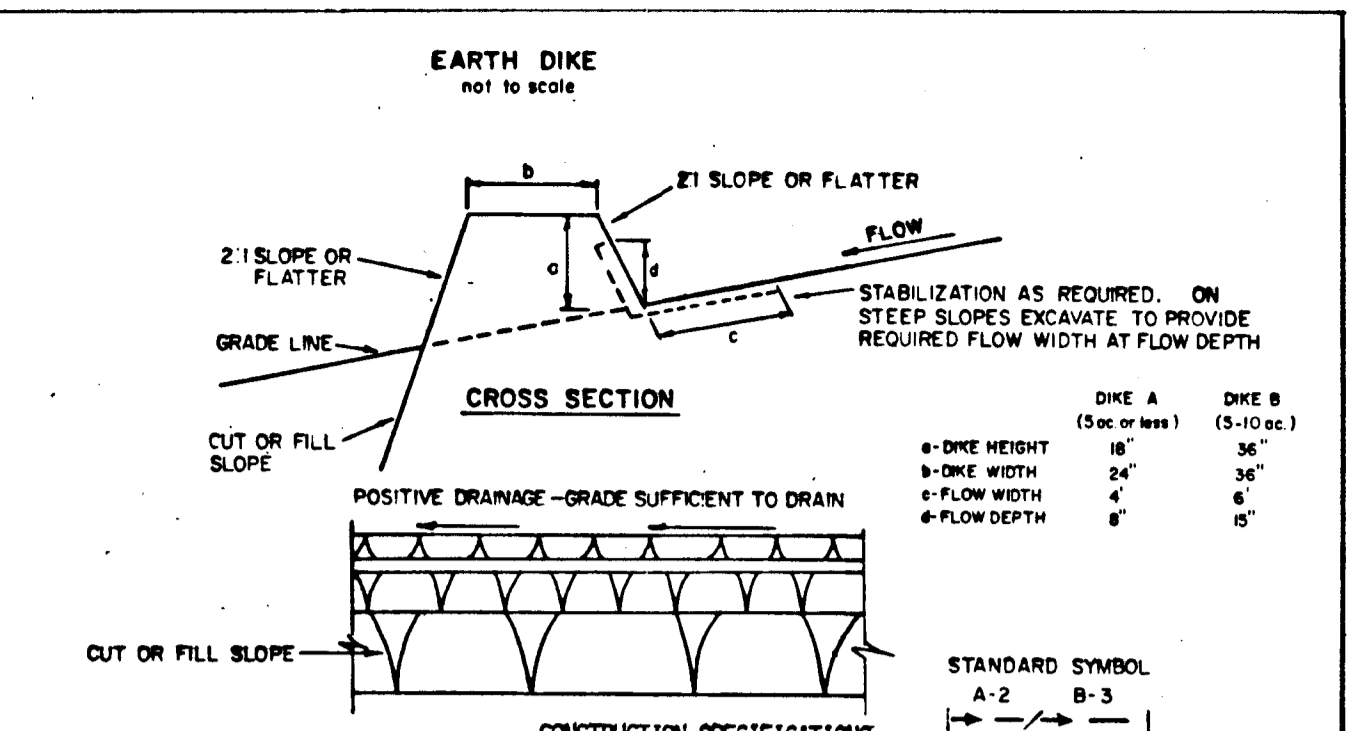
SOIL CLASSIFICATION MAP
SCALE: 1" = 200'



CONSTRUCTION SPECIFICATIONS FOR ST-Y
 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 3. All cut and fill slopes shall be 2:1 or flatter.
 4. The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap embedded filter cloth in the riprap.
 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
 6. The structure shall be inspected after each rain and repairs as needed.
 7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

Maximum Drainage Area: 5 Acres
 U.S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 COLLEGE PARK, MARYLAND

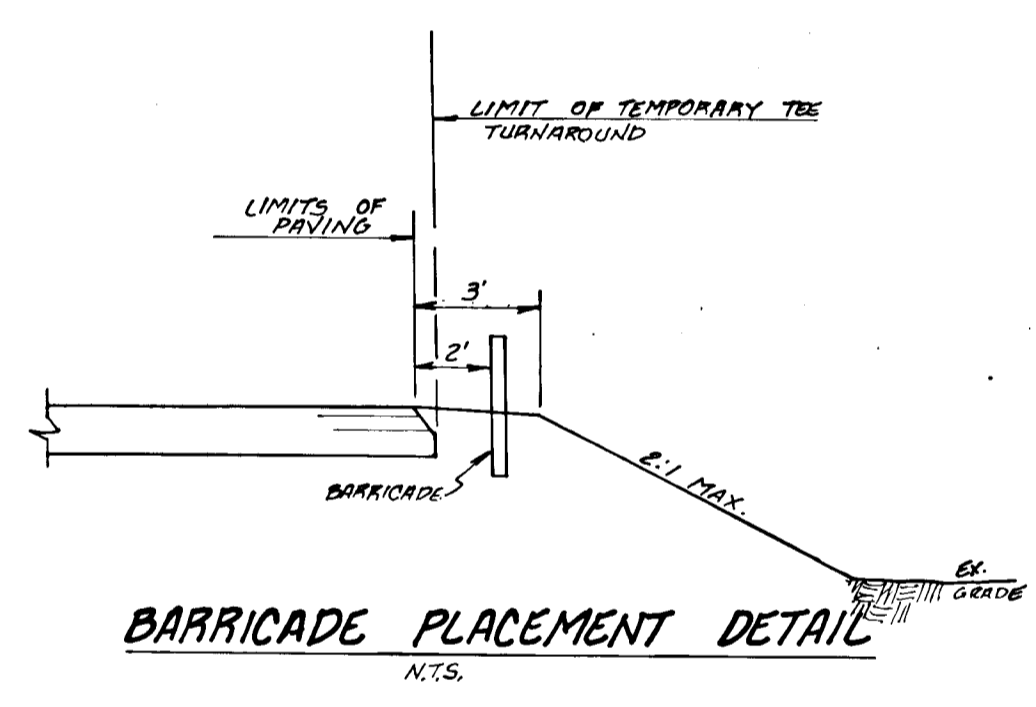
STONE OUTLET SEDIMENT TRAP
STANDARD DRAWING ST-3



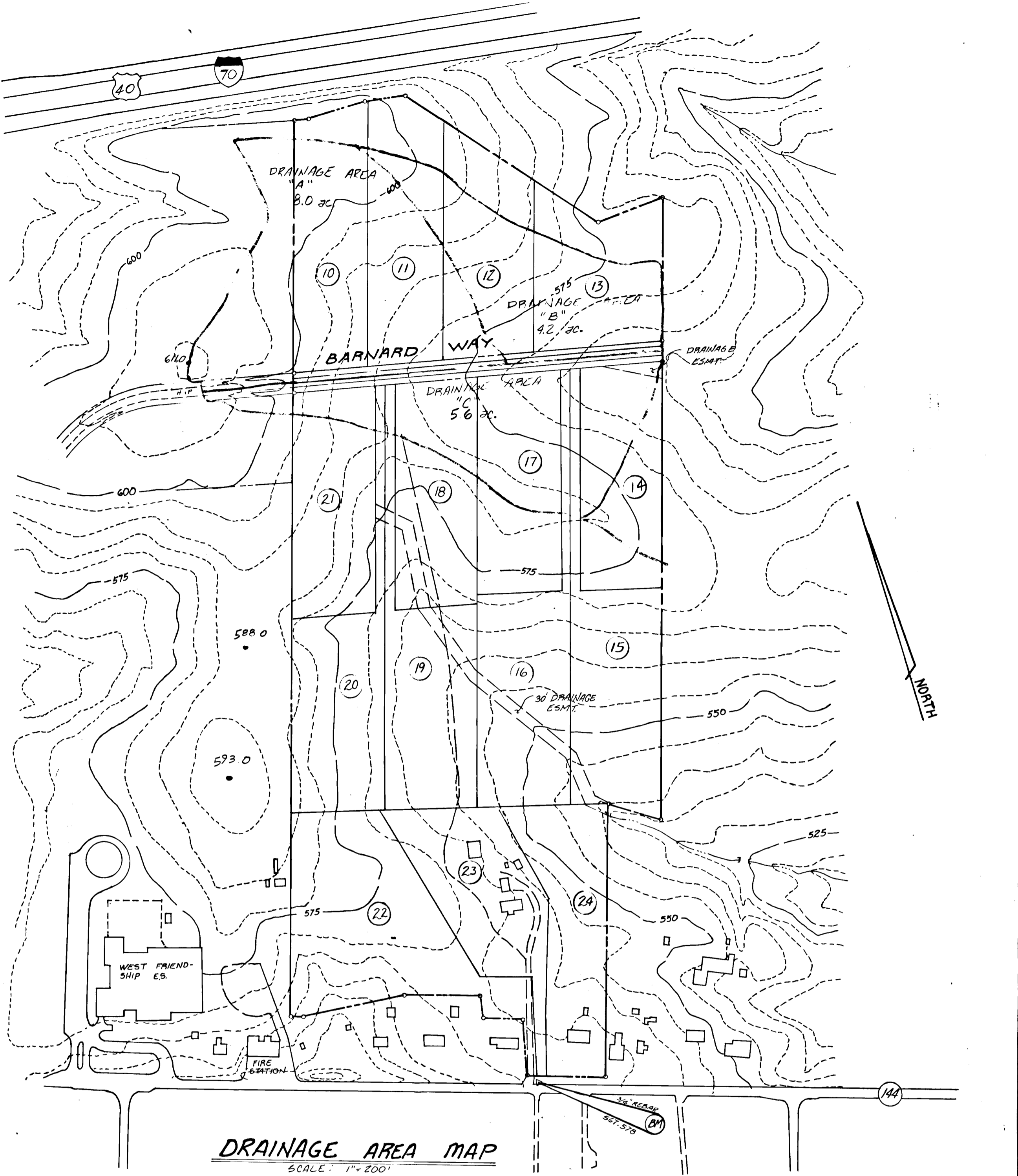
CONSTRUCTION SPECIFICATIONS
 1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
 2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
 3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
 4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
 5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
 6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.
 7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 COLLEGE PARK, MARYLAND

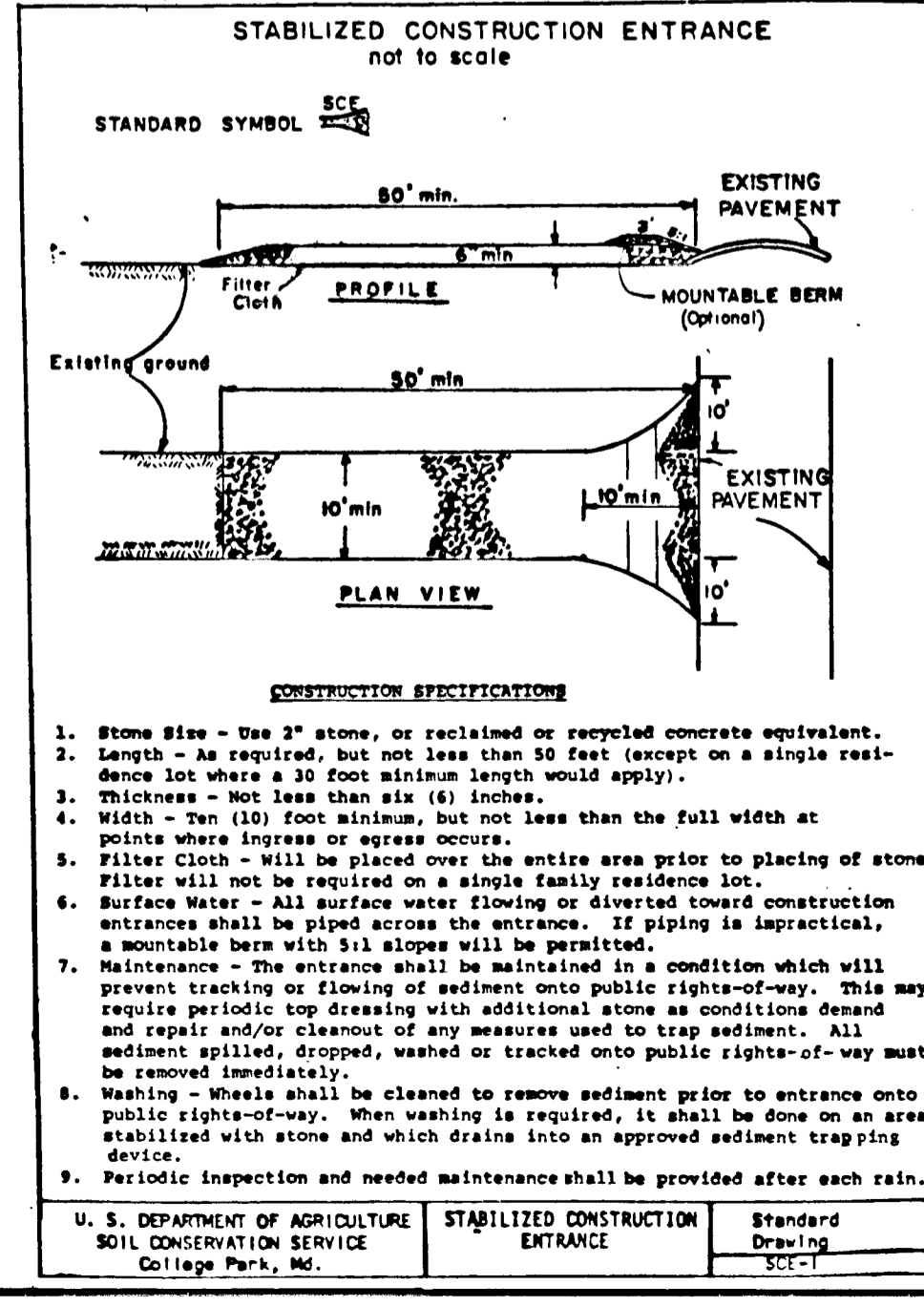
EARTH DIKE
STANDARD DRAWING ED-1



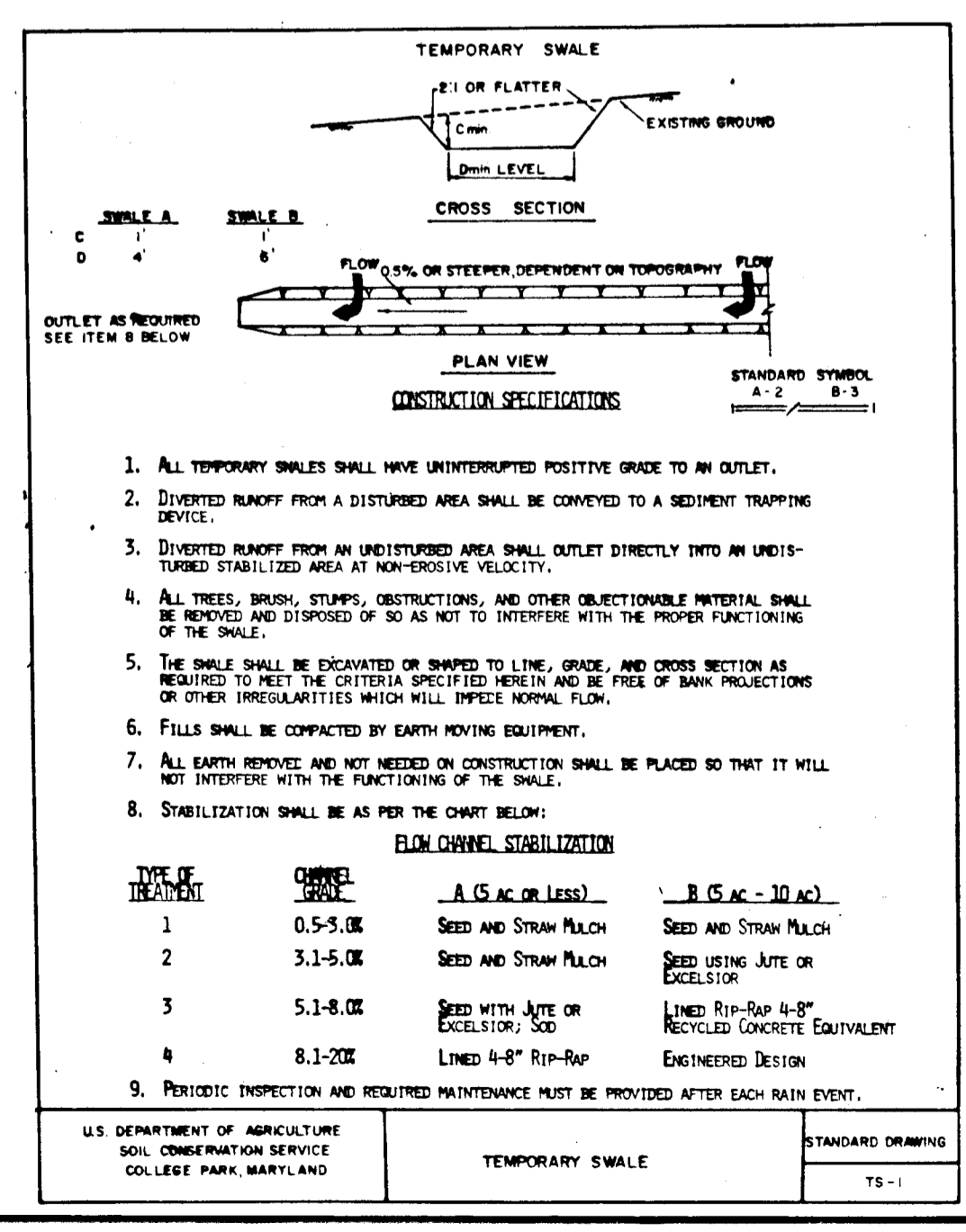
BARRICADE PLACEMENT DETAIL
NOTES



DRAINAGE AREA MAP
SCALE: 1" = 200'



STABILIZED CONSTRUCTION ENTRANCE
STANDARD DRAWING SC-1



TEMPORARY SWALE
STANDARD DRAWING TS-1

DEPARTMENT OF PUBLIC WORKS
 APPROVED FOR STORM DRAINAGE & PUBLIC ROADS
 DATE: 3/14/88
 DATE: 3/17/88
 DATE: 3/18/88
 DATE: 3/23/88

STATE OF MARYLAND
 DEPARTMENT OF PUBLIC WORKS
 Saurabh Muneshi
 SOURABH G. MUNESHI
 PROFESSIONAL ENGINEER No. 10,539
 DATE: 10/20/87
 DRAINAGE AREA MAP AND CONSTRUCTION DETAILS
MATHIS PROPERTY
 LOTS 10-24, SECTION 2
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 OCTOBER 1987
 JOB No. 251-379
 SHEET No. 5 of 5