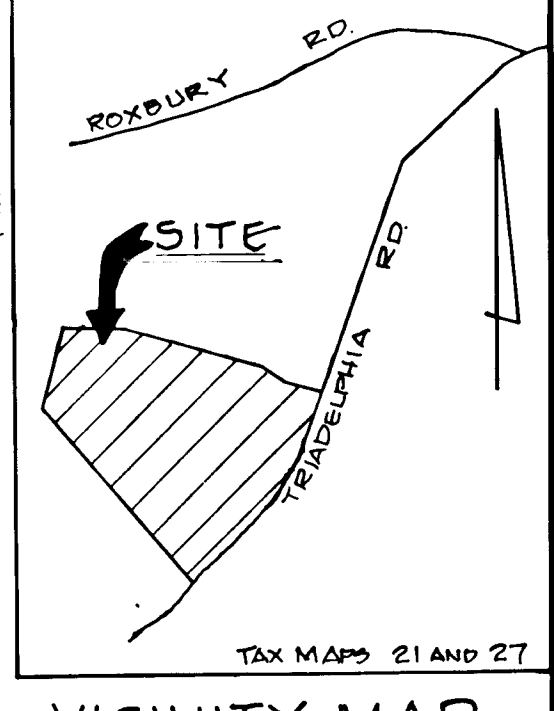
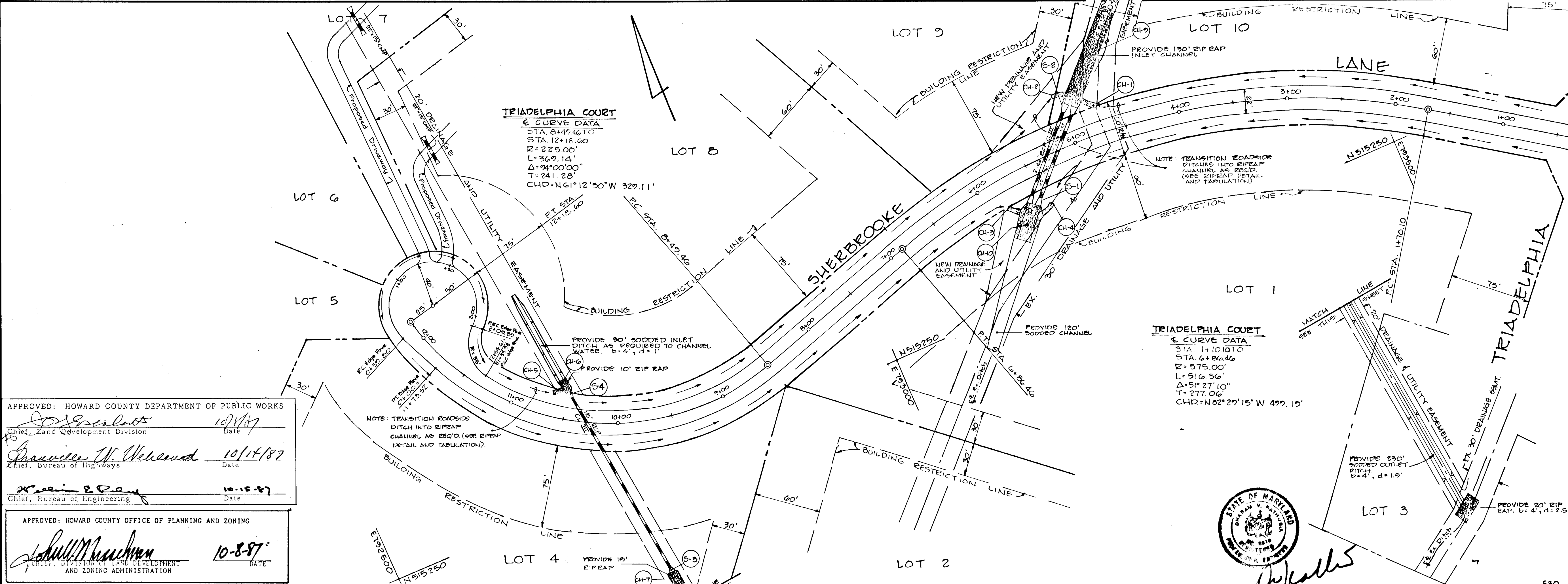


DATE  
BY  
REVISIONS  
NO. 1  
NO. 2  
NO. 3  
NO. 4  
NO. 5

DATE  
BY  
REVISIONS  
NO. 1  
NO. 2  
NO. 3  
NO. 4  
NO. 5



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Land Development Division  
 Date: 10/14/87

*James W. Wilkerson*  
 Chief, Bureau of Highways  
 Date: 10-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 Chief, Division of Land Development and Zoning Administration  
 Date: 10-8-87

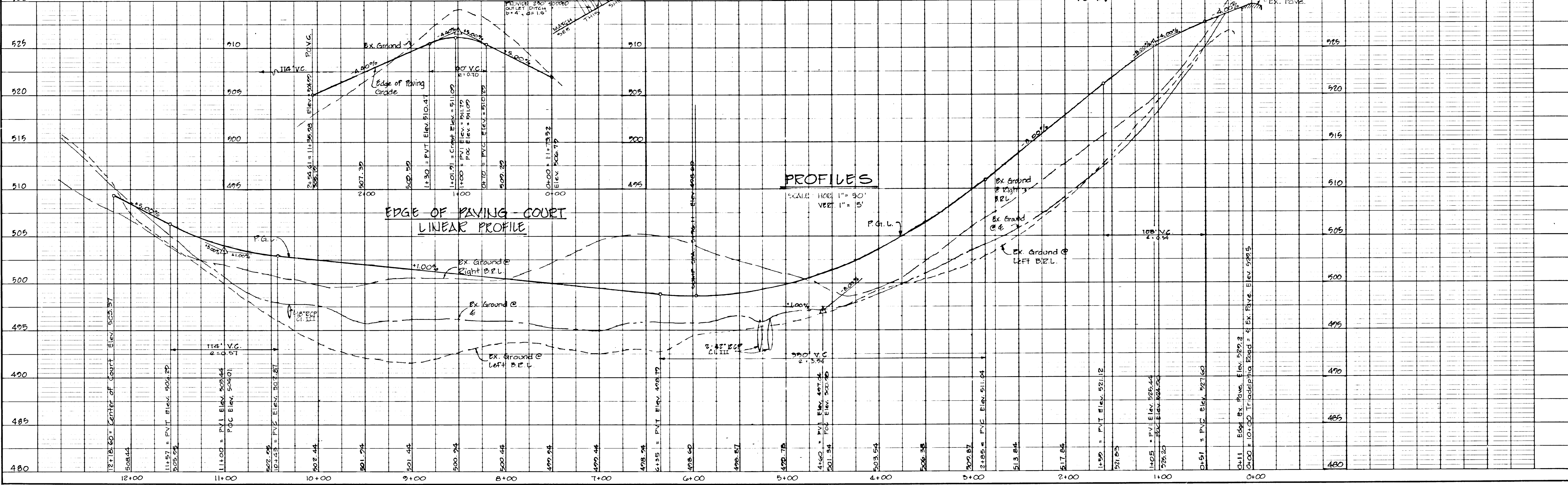
*John M. Mearns*

**TRIADDELPHIA ESTATES**  
 LOTS 1-10  
 4TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**SHERBROOKE LANE**  
 PLAN AND PROFILE

**OWNER AND DEVELOPER:**  
 RANDALL JAGOD-SONI, ET AL  
 11906 BLUE FEBELARY WAY  
 COLUMBIA, MARYLAND 21044

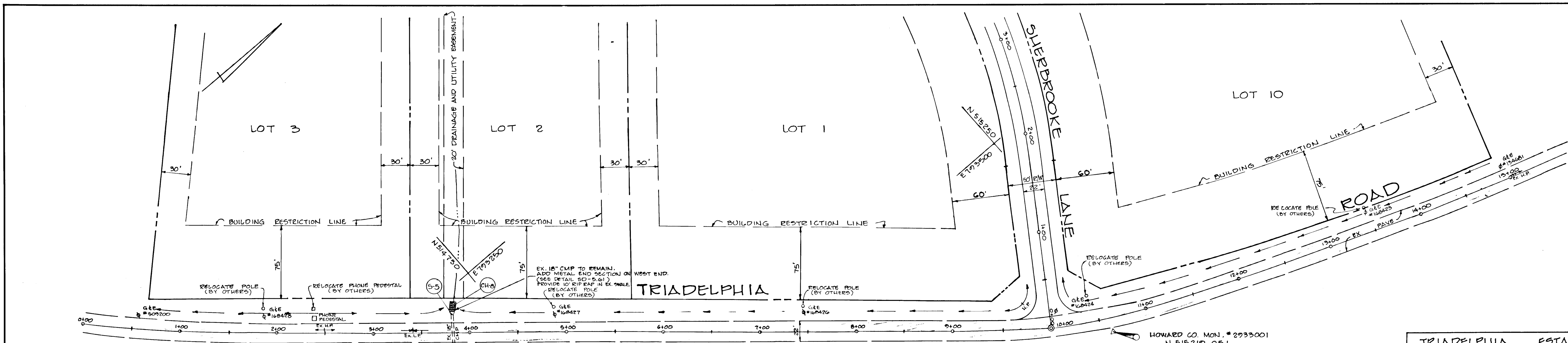
SCALE: 1" = 50' DATE: AUG, 1987 DWG. NO. 1 OF 5  
 DESIGN: PKM DEPT: REC CHECK: PKM  
 ENGINEERING TECHNOLOGIES ASSOCIATES, INC.  
 ENGINEERS, SURVEYORS, CONSTRUCTION MANAGERS  
 814 BELTWAY AVENUE, 7TH FLOOR  
 SUITE 7000, WASHINGTON, D.C. 20004  
 (202) 462-1800



1336

DATE  
BY  
SURVYD.  
NOTED.  
NOTE BOOK  
No.

DATE  
BY  
SURVYD.  
NOTED.  
NOTE BOOK  
No.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Land Development Division  
 Chief, Bureau of Highways  
 Chief, Bureau of Engineering

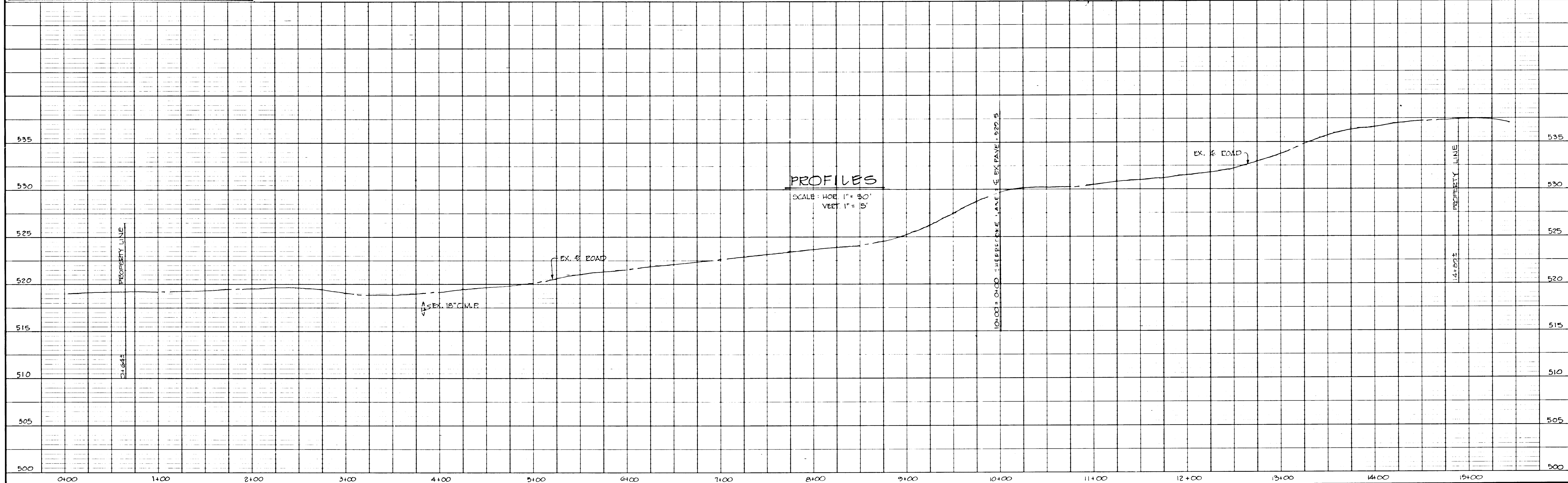
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 Chief, Division of Land Development and Zoning Administration

TRIADELPHIA ESTATES  
 LOTS 1-10  
 4TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TRIADELPHIA ROAD  
 PLAN AND PROFILE

OWNER AND DEVELOPER:  
 RANDALL JACOBSON, ET AL  
 11000 BLUE FEBRUARY WAY  
 COLUMBIA, MARYLAND 21044

SCALE: 1"=50' DATE: AUG, 1987 DWG. NO. 2 OF 5  
 DESIGN: F.K. DRAFT: L.F.C. CHECK: F.K. J.  
 ENGINEERING TECHNOLOGIES  
 ASSOCIATES, INC.  
 ENGINEERS, SURVEYORS, CONSTRUCTION MANAGERS  
 400 BELT ROAD, SUITE 100  
 ELICHTER, CITY, MARYLAND 21044  
 (301) 461-1400



1336

TRIADELPHIA ROAD (EXISTING)

K&E PLATE 1, PLAN PROFILE  
 KEUFFEL & ESSER CO.  
 48 7024 MADE IN U.S.A.

F-89-167

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John M. ...* 10-2-87  
 CHIEF, DIVISION OF PLANNING AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*James ...* 10/2/87  
 Chief, Land Development Division  
*James W. Wilcand* 10/14/87  
 Chief, Bureau of Highways  
*...* 10-16-87  
 Chief, Bureau of Engineering

**DRAINAGE AREA MAP**  
 SCALE: 1"=200'

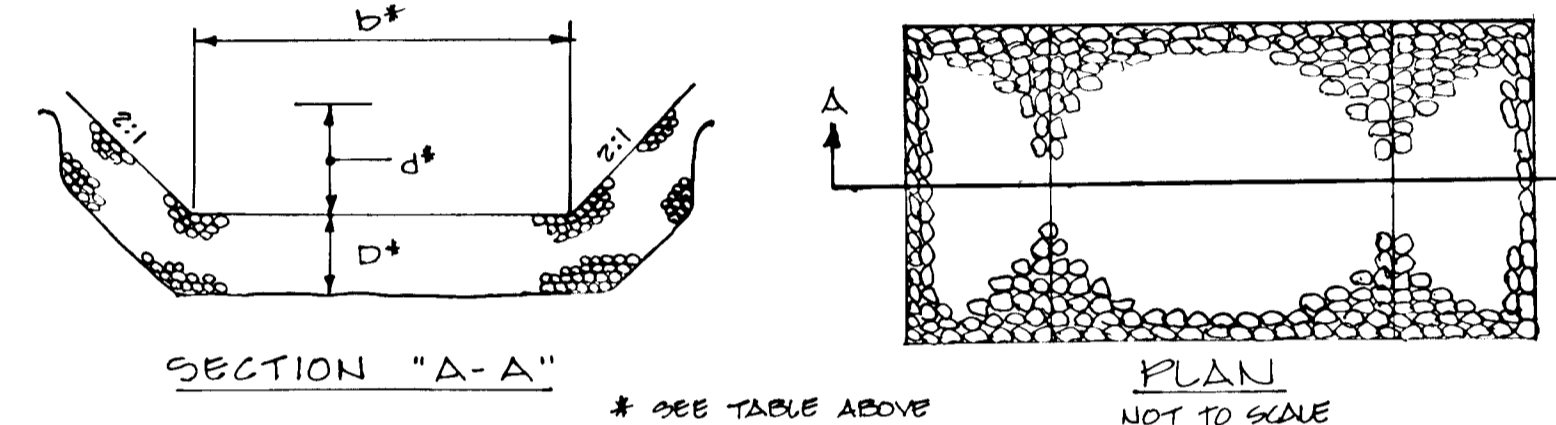


**STRUCTURE SCHEDULE**

N.O.	TYPE	INVERT IN	INVERT OUT	TOP ELEV.	STATION	REMARKS
S-1	Two - 42" Conc. Flared End Sect.	—	492.50	—	5+45	Detail 5D-5.51 or 5D-5.52
S-2	Two - 42" Conc. Flared End Sect.	492.78	—	—	5+02	Detail 5D-5.51 or 5D-5.52
S-3	18" Conc. Flared End Section	—	488.50	—	9+75	Detail 5D-5.51 or 5D-5.52
S-4	18" Conc. Flared End Section	497.50	—	—	10+47	Detail 5D-5.51 or 5D-5.52
S-5	18" Metal Flared End Section	—	Ex. 516.4	—	3+81	Detail 5D-5.61

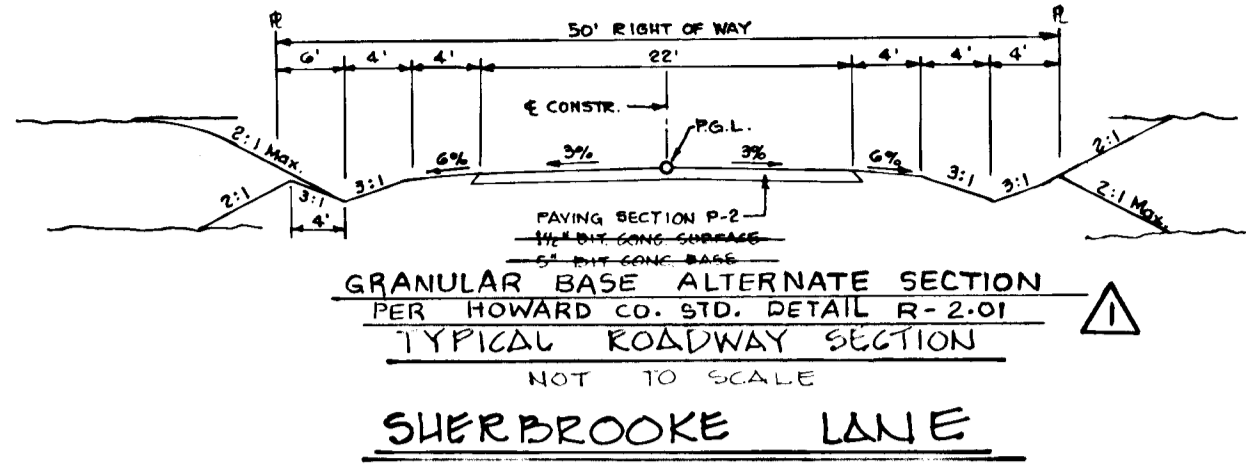
**RIPRAP CHANNEL TABLE**

CHANNEL NO.	L	b	D	d	CHANNEL BOTTOM ELEV.	
					UPSTREAM	DOWNSTREAM
CH-1	15'	2'	0.75'	0.5'	498.6	493.0
CH-2	10'	2'	0.75'	0.5'	495.5	493.0
CH-3	10'	2'	0.75'	0.5'	496.3	492.4
CH-4	15'	2'	0.75'	0.5'	495.7	492.4
CH-5	8'	2'	0.75'	0.5'	501.3	497.7
CH-6	10'	4'	1.0'	1.0'	498.3	497.8
CH-7	15'	4'	1.0'	1.0'	488.2	487.5
CH-8	10'	2'	0.75'	0.5'	516.3	516.0
CH-9	130'	6'	1.67'	1.5'	499.3	492.8
CH-10	30'	15'	1.67'	2.3'	492.5	492.3



**RIPRAP CHANNEL DETAIL**

NOTE: FOR CH-1 THROUGH CH-8 USE CLASS I RIP RAP & FOR CH-9 AND CH-10 USE CLASS II RIP RAP AS SPECIFIED IN STANDARD, AND SPECIFICATION FOR CONSTRUCTION MATERIALS, MARYLAND S.H.A. JAN. 1982



**TYPICAL ROADWAY SECTION**  
 EX. TRIADELPHIA ROAD

**REVISIONS**

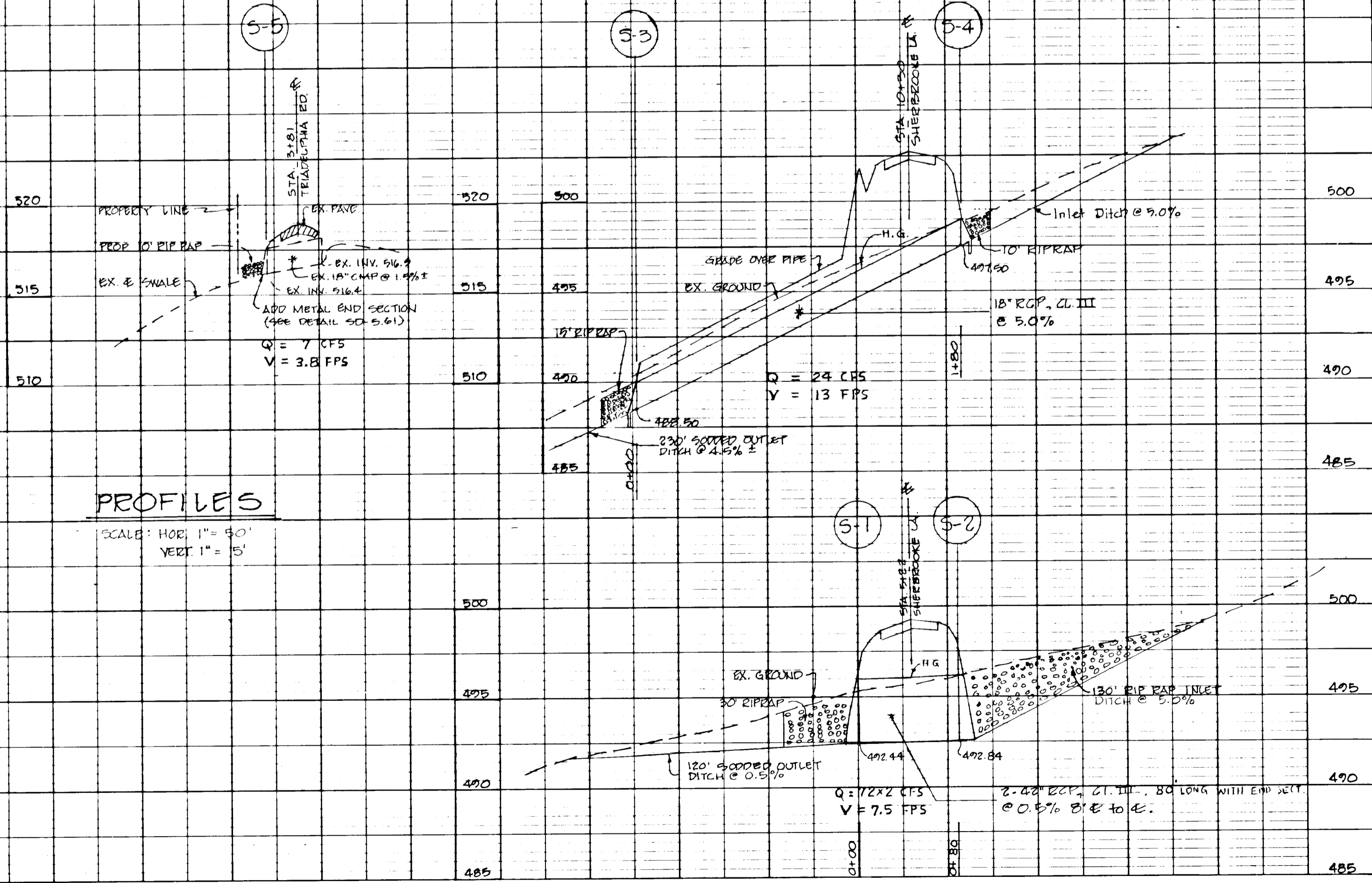
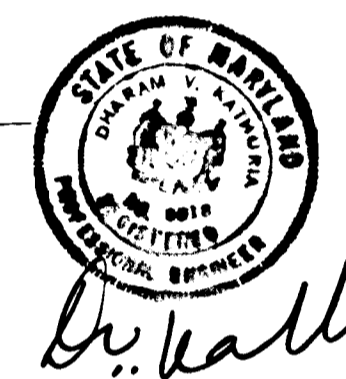
DATE	BY	DESCRIPTION
12-16-87	K.A.P.	CHANGE THE DETAIL OF ROADWAY SECTION

**TRIADELPHIA ESTATES**  
 LOTS 1-10  
 4TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**DRAINAGE AREA MAP**  
 STORM DRAIN PROFILES & DETAILS

OWNER AND DEVELOPER:  
 RANDALL JAGGSON, ET AL  
 1906 BLUE FEBRUARY WAY  
 COLUMBIA, MARYLAND 21044

SCALE: 1"=50' DATE: AUG, 1987 DWG. NO. 3 OF 5  
 DESIGN: PKM DRAFT: DE CHECK: PLM  
 ENGINEERING TECHNOLOGIES ASSOCIATES, INC.  
 ENGINEERS, SURVEYORS, CONSTRUCTION MANAGERS  
 1000 SOUTH MOUNTAIN ROAD  
 ELICOTT CITY, MARYLAND 21043  
 (301) 481-8900



**PROFILES**

SCALE: HORIZ 1"=50'  
 VERT 1"=5'

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 PLAN NOTE BOOK NO. \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 PROFILE NOTE BOOK NO. \_\_\_\_\_

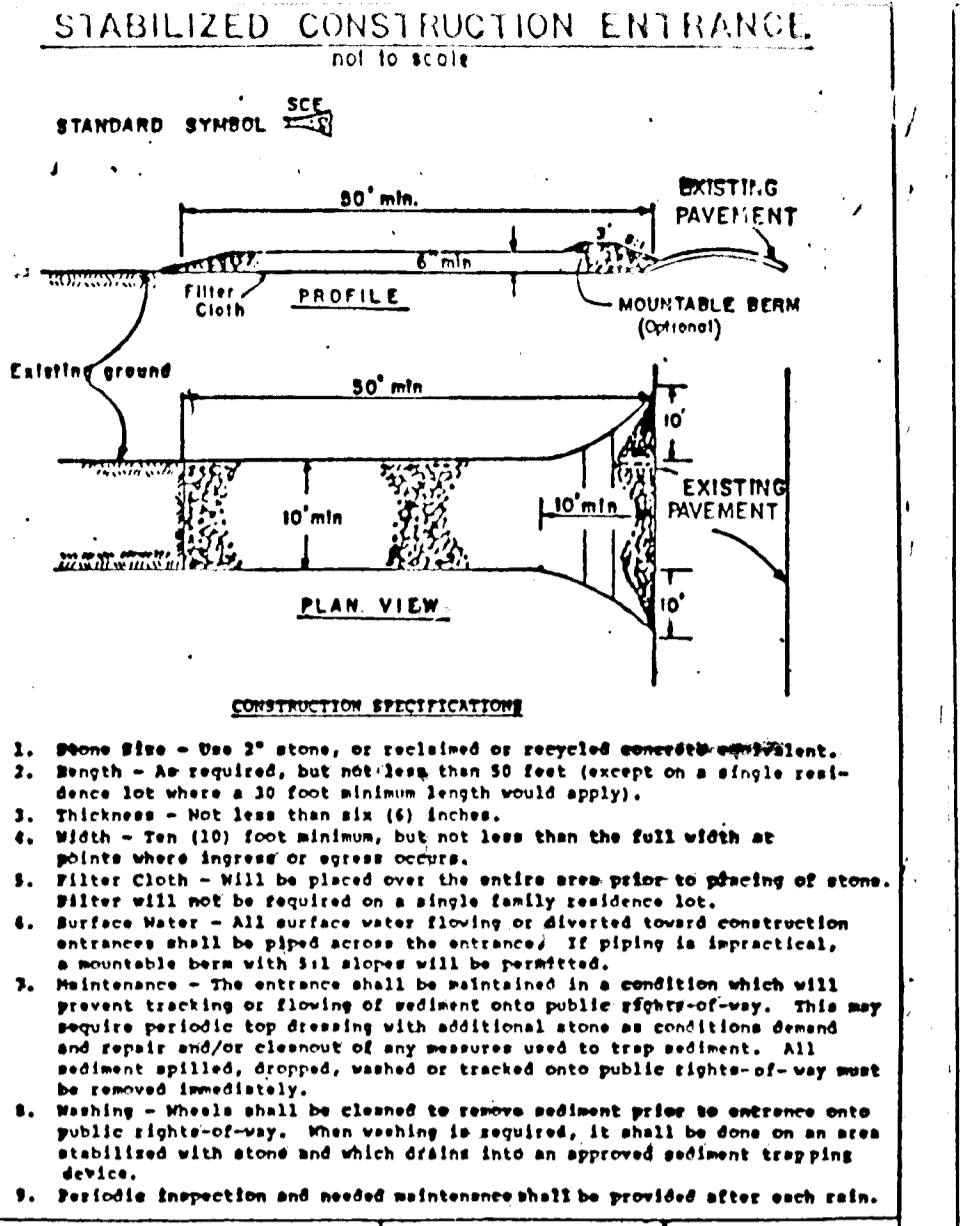
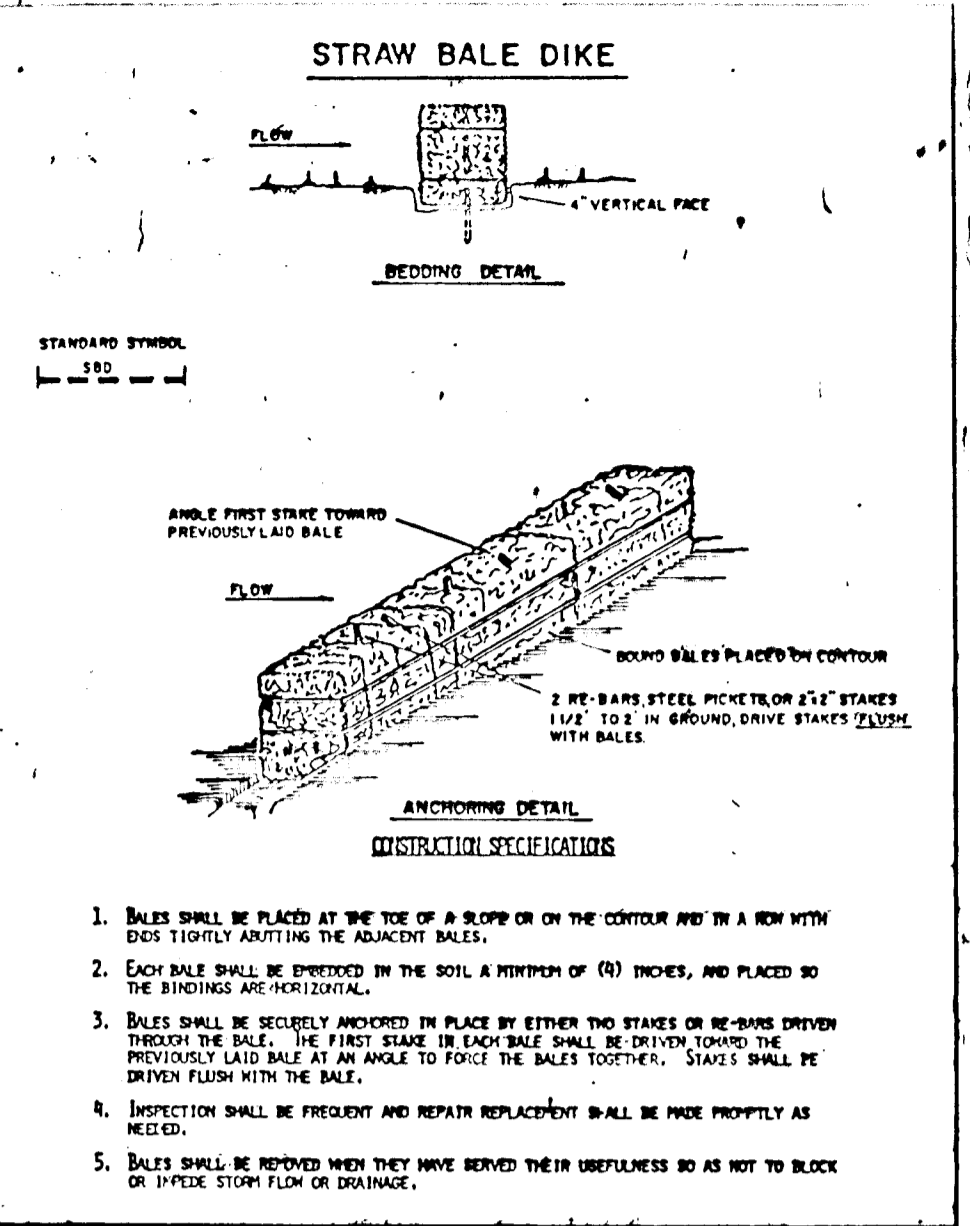
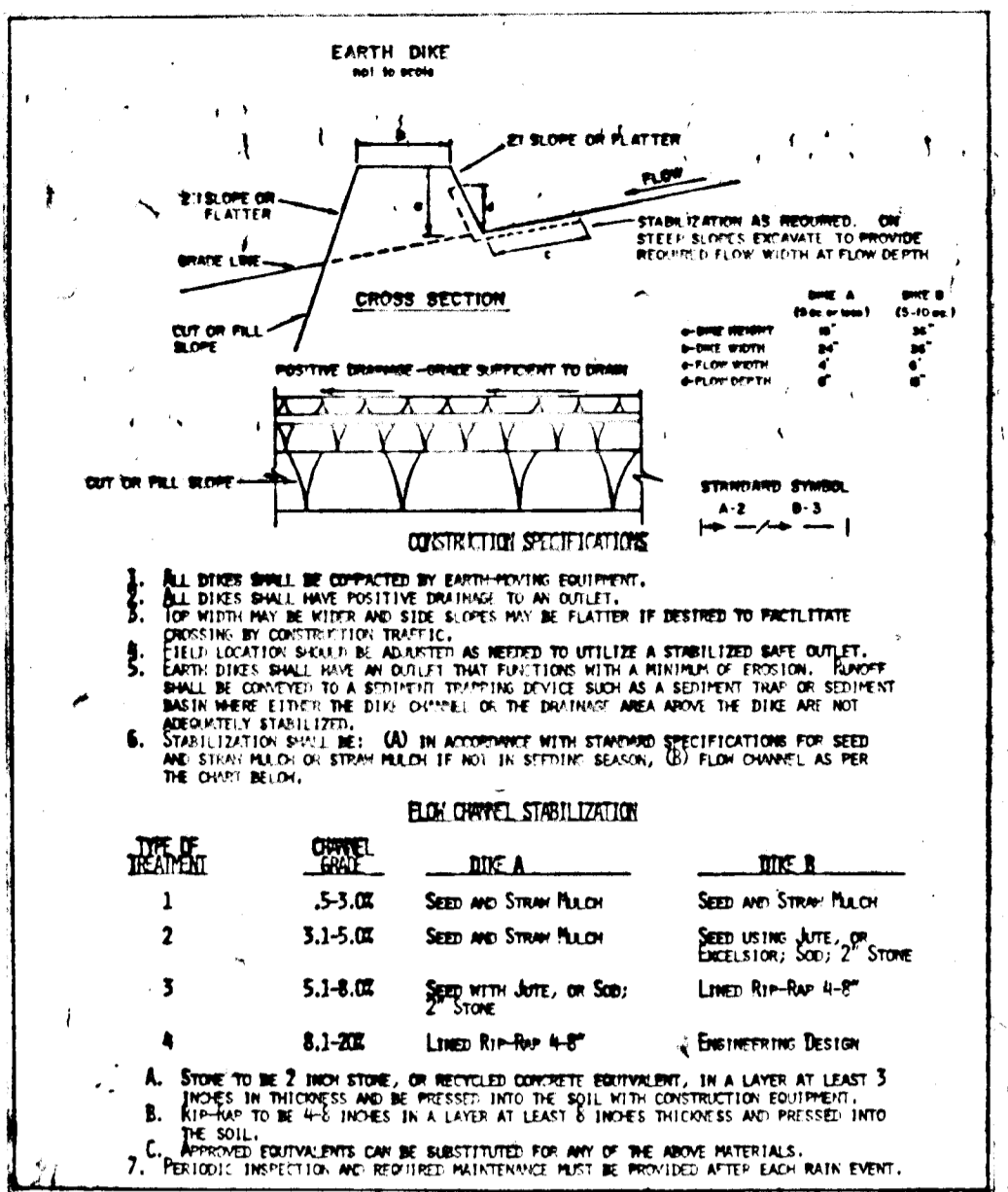
1376

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Land Development Division  
 Chief, Bureau of Highways  
 Date: 10/8/87  
 Date: 10/14/87  
 Date: 10-15-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 Chief, Planning and Zoning Administration  
 Date: 10-8-87

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND METS TECHNICAL REQUIREMENTS  
 District Engineer  
 Date: 10/7/87

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 District Engineer  
 Date: 10/6/87



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. (592-2437)
- 2) 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.
- 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.
- 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 HANDBOOK, 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) and temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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: 36.8 Acres  
 Area Disturbed: 3.2 Acres  
 Area to be roofed or paved: 0.7 Acres  
 Area to be vegetatively stabilized: 2.5 Acres (incl. stone)  
 Total Cut: 1,000 Cu. Yds  
 Total Fill: 2,000 Cu. Yds  
 Office waste/borrow area location
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be replaced on the same day of disturbance.
- 9) Additional sediment controls must be provided if deemed necessary by the Howard County DCM 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.

PERMANENT SEEDING NOTES

Seeding Preparation: Loosen upper 3 inches of soil by raking, disking or other acceptable means before seeding.

Soil Amendments: Use one of the following schedules:

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

Seeding: For the periods March 1 through April 30, and August 1 through October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period July 1 through July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 square ft.) of seeding loafgrass. During the period of October 16 through 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 reseedings.

TEMPORARY SEEDING NOTES

Seeding Preparation: Loosen upper 3 inches of soil by raking, disking or other acceptable means before seeding.

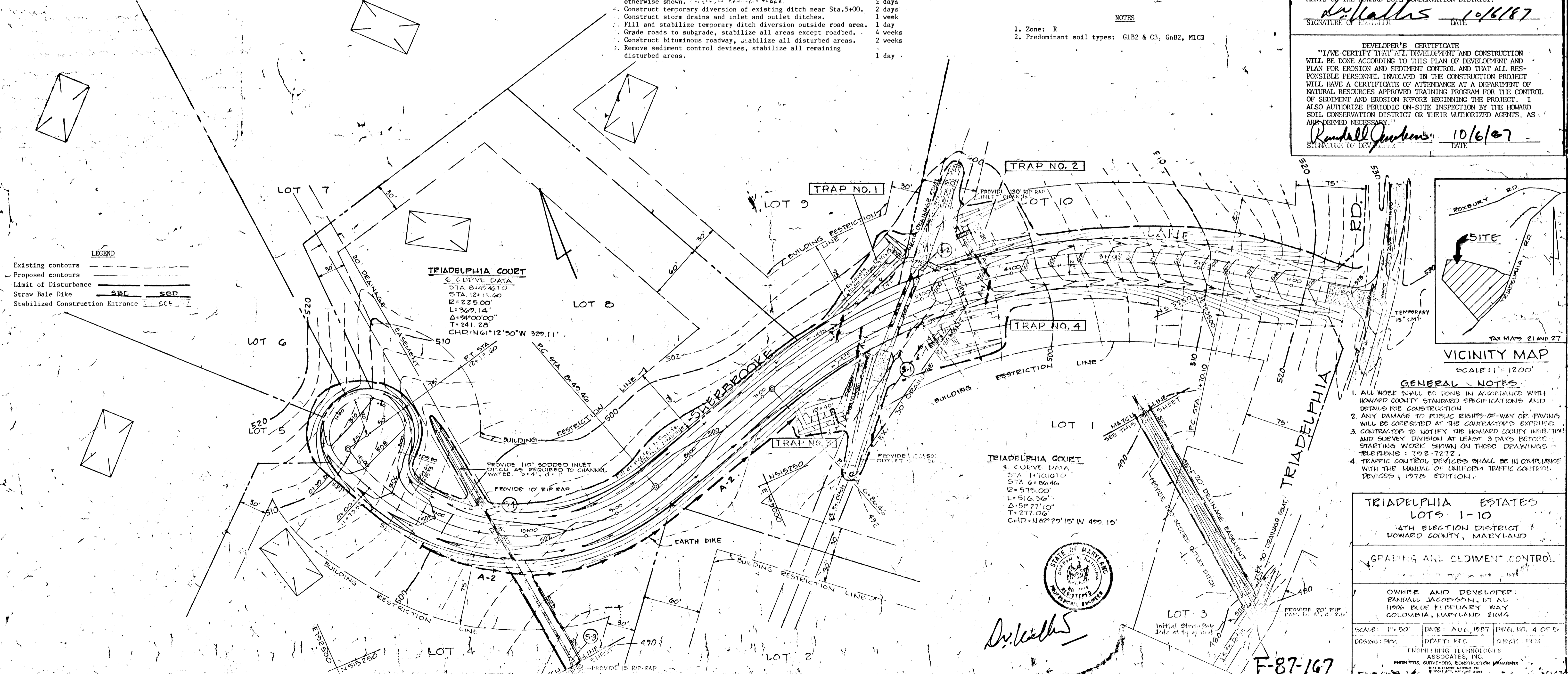
Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.)

Seeding: For periods March 1 through April 30 and from August 15 through October 15, seed with 24 lbs. per acre of annual ryegrass (3.2 lbs./1000 sq. ft.) For the period May 1 through August 14, seed with 3 lbs. per acre of seeding loafgrass (.07 lbs./1000 sq. ft.) For the period November 16 through February 28, protect the site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring of 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.

SEQUENCE OF CONSTRUCTION

1. Obtain Grading Permit. 1 day
2. Construct Stabilized Construction Entrance. 1 day
3. Place Straw Bale Dikes along Limit of Disturbance and as otherwise shown. Construction entrance + areas. 2 days
4. Construct temporary diversion of existing ditch near Sta. 5+00. 2 days
5. Construct storm drains and inlet and outlet ditches. 1 week
6. Fill and stabilize temporary ditch diversion outside road area. 1 day
7. Grade roads to subgrade, stabilize all areas except roadbed. 4 weeks
8. Construct bituminous roadway, stabilize all disturbed areas. 2 weeks
9. Remove sediment control devices, stabilize all remaining disturbed areas. 1 day



1236



TRIADELPHIA ESTATES  
 LOTS 1-10  
 4TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SEALING AND SEDIMENT CONTROL

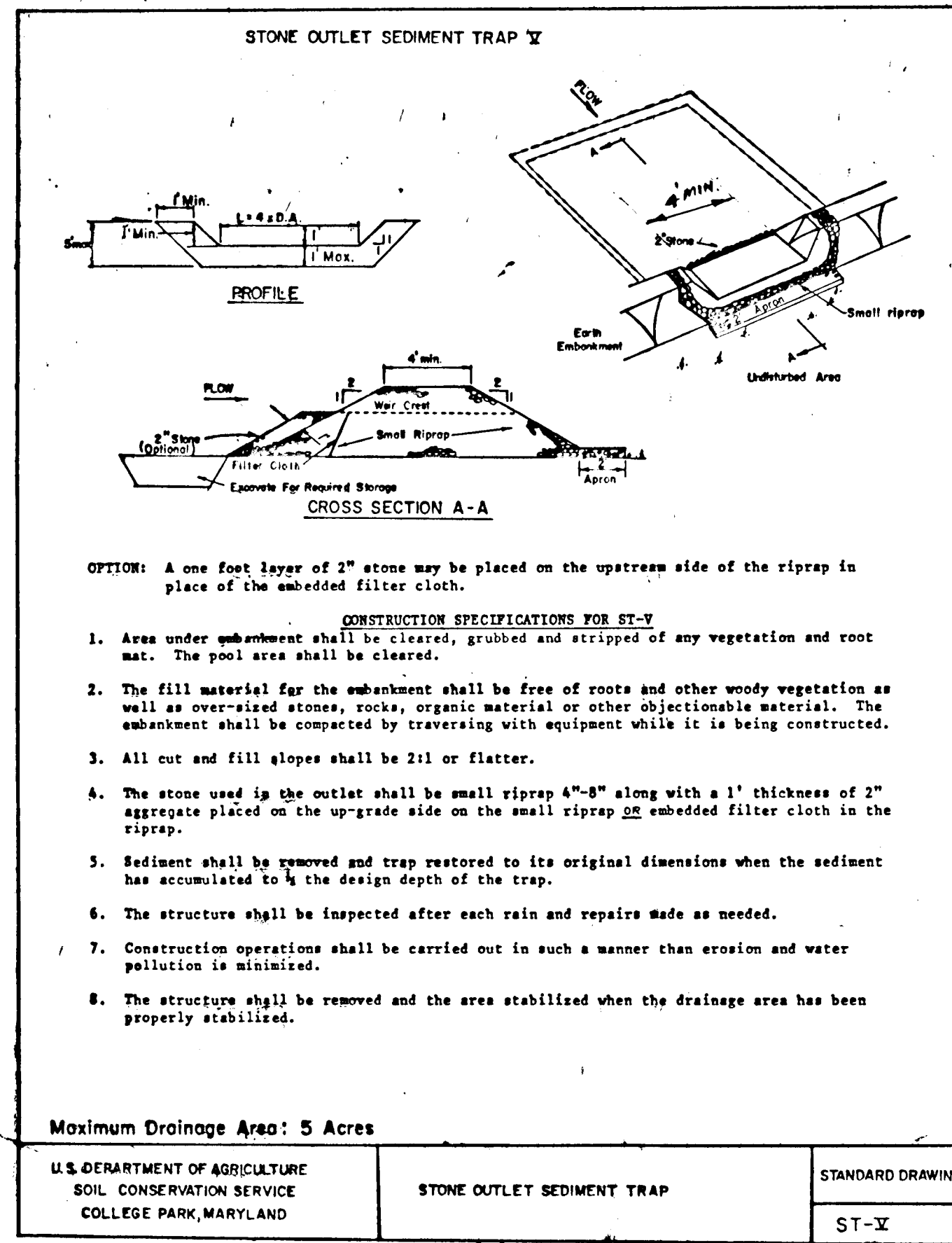
OWNER AND DEVELOPER:  
 RANDALL JACOBSON, ET AL  
 1100 BLUE FERTUARY WAY  
 COLUMBIA, MARYLAND 21044

SCALE: 1"=50'  
 DESIGN: PERM  
 ENGINEERING TECHNOLOGISTS ASSOCIATES, INC.  
 ENGINEERS, SURVEYORS, CONSTRUCTION MANAGERS

DATE: AUG, 1987  
 DWG NO. 4 OF 5  
 DEPT: REC  
 CHECK: PERM

F-87-167

SEDIMENT TRAP SUMMARY					
TRAP NO.	1	2	3	4	5
Type of trap (Std. Detail)	ST-V	ST-V	ST-V	ST-V	ST-V
Drainage area	0.26 Ac.	0.55 Ac.	0.40 Ac.	0.25 Ac.	1.10 Ac.
Storage required	468 c.f.	990 c.f.	720 c.f.	450 c.f.	1,980 c.f.
Storage provided	500 c.f.	1,000 c.f.	800 c.f.	480 c.f.	2,000 c.f.
Outlet length	4 ft.	4 ft.	4 ft.	4 ft.	4.5 ft.
Bottom elevation	497.0	497.0	492.0	495.0	513.0
Crest elevation (weir)	499.0	499.0	494.0	497.0	515.0
Cleanout elevation	498.0	498.0	493.0	496.0	514.0
Embankment top elev.	500.0	500.0	495.0	498.0	516.0



ENGINEER'S CERTIFICATE  
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*D. K. Kates* 10/6/87  
 SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE  
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*Randall J. Dunsen* 10/6/87  
 SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

*James W. Hill* 10/7/87  
 HOWARD SOIL CONSERVATION SERVICE DATE

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

*William L. Fisher* 10/7/87  
 HOWARD SOIL CONSERVATION DISTRICT DATE

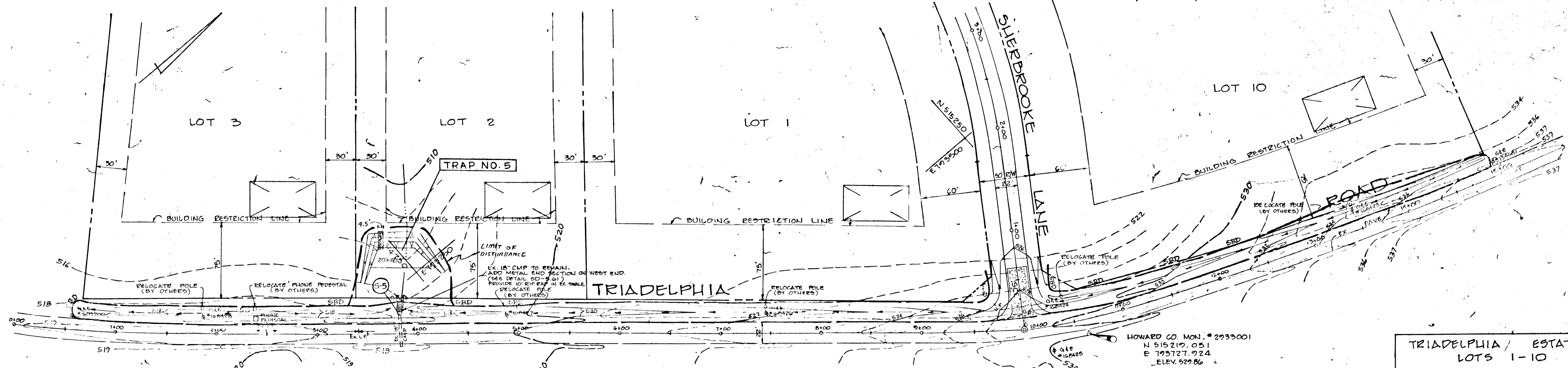
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division Date  
*Granville W. Westland* 10/14/87  
 Chief, Bureau of Highways Date

*James E. Pugh* 10-15-87  
 Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*John W. Hancock* 10/8/87  
 PLANNING AND ZONING ADMINISTRATION DATE



TRIADDELPHIA / ESTATES  
 LOTS 1-10  
 4TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

GRADING AND SEDIMENT CONTROL

OWNER AND DEVELOPER:  
 RANDALL JACOBSON, ET AL  
 11906 BLUE FEBRUARY WAY  
 COLUMBIA, MARYLAND 21044

SCALE: 1"=50' DATE: AUG. 1987 DWG. NO. 1 OF 5  
 DESIGN: PEM DEPT. REC CHECK: PEM  
 ENGINEERING TECHNOLOGIES  
 ASSOCIATES, INC.  
 ENGINEERS, SURVEYORS, CONSTRUCTION MANAGERS  
 1000 W. BALTIMORE AVE.  
 BALTIMORE, MARYLAND 21201  
 TEL: 410-528-1000

13310

*D. K. Kates*  
 F-87-167