

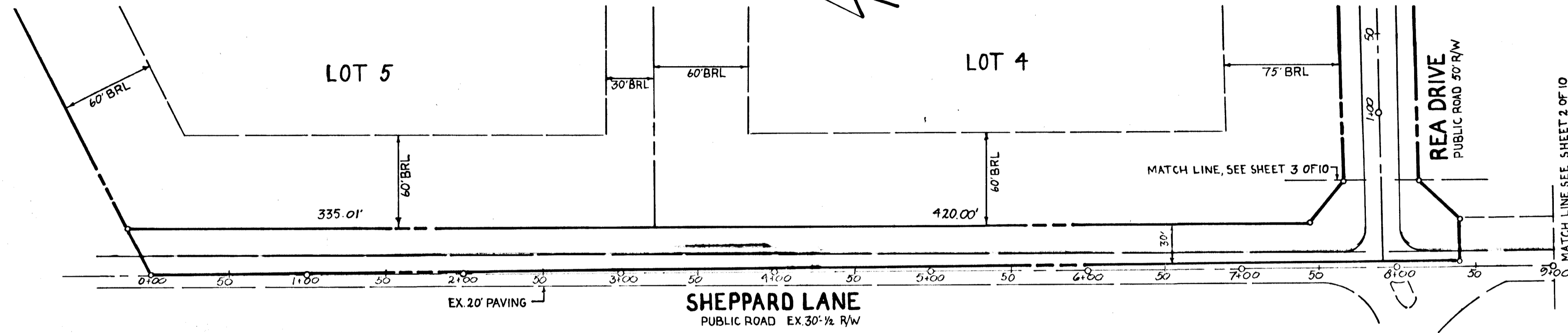
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John J. ... 4/1/91
 Chief, Land Development Division
Lawrence W. Welstead 3/28/91
 Chief, Bureau of Highways
William J. ... 4-4-91
 Chief, Bureau of Engineering

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Robert ... 4/2/91
 Chief, Division of Community Planning
 And Land Development

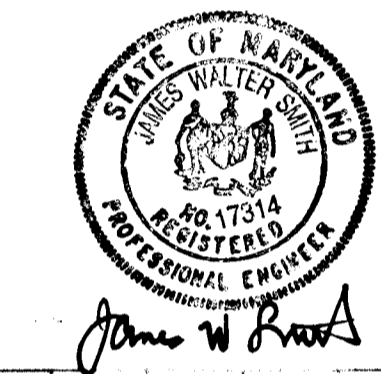
BY	REVISION	DATE

PLAN
 SHEET NO. _____
 DATE _____
 BY _____
 CHECKED _____
 IN CHARGE _____

PROFILE
 SHEET NO. _____
 DATE _____
 BY _____
 CHECKED _____
 IN CHARGE _____



PLAN
 SCALE: 1"=50'

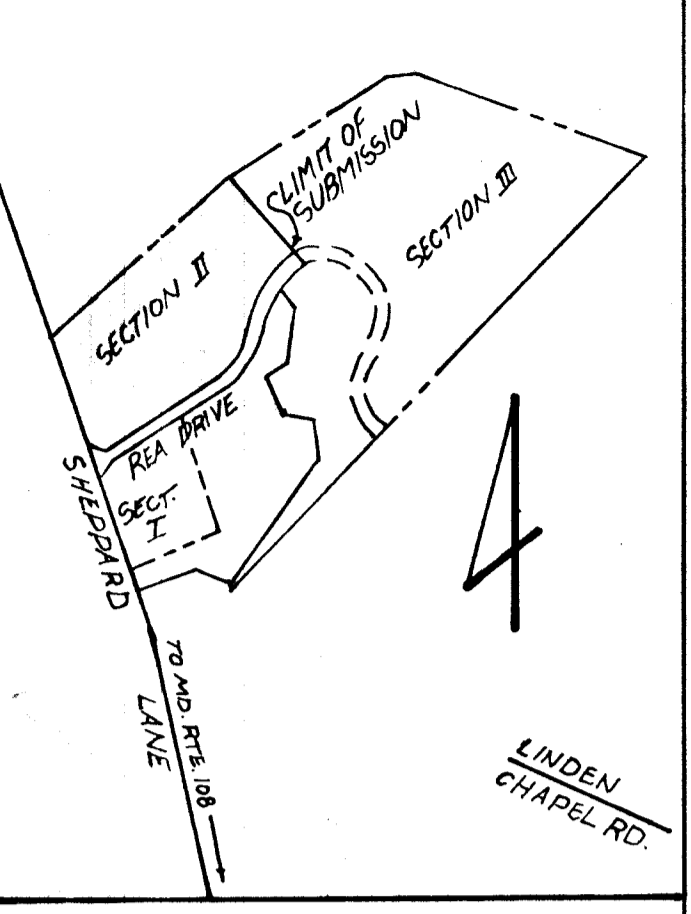


TITLE: ROAD CONSTRUCTION PLAN			
PROJECT: SHEPPARD HILLS SECTION II			
LOCATION: 5TH ELECTION DISTRICT HOWARD CO., MD.			
SCALE: AS SHOWN	DESIGNED BY: J.C.O.	CHECKED BY: L.E.B.	DATE: NOV, 1988
FIELD BOOK: _____	PAGE NO.: _____	JOB NO.: 8311	DRAWING NO.: 1 OF 10

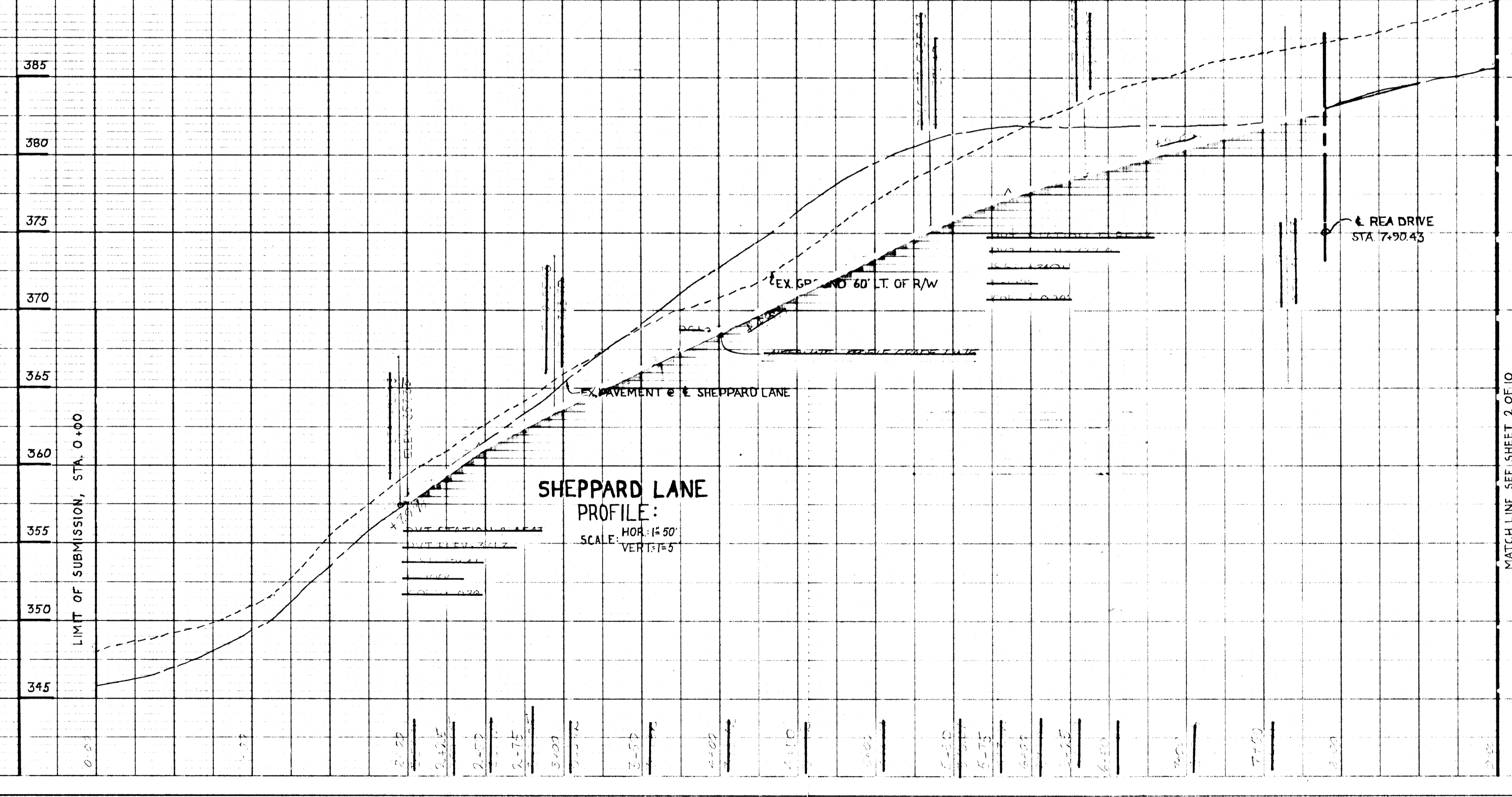
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 inc.
 consulting engineers
 land surveyors
 land planners

COURTHOUSE SQUARE
 3565 ELLICOTT MILLS DRIVE
 ELLICOTT CITY, MD. 21043
 (301) 465-1777

- GENERAL NOTES
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL TEST PIT FOR EXISTING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO STARTING WORK SHOWN ON THESE DRAWINGS.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO BEGINNING WORK SHOWN ON THESE DRAWINGS.
 - MISS UTILITY.....559-0100
 - BELL TELEPHONE SYSTEM.....393-3649
 - LONG DISTANCE CABLE DIVISION.....393-3553/3554
 - BALTIMORE GAS & ELECTRIC COMPANY.....539-8000
 - HOWARD COUNTY BUREAU OF UTILITIES.....992-2366
 - HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK).....792-7272
 - ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
 - ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED.
 - STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
 - INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1988 REVISION ADDITION.
 - PIPE SHALL NOT BE INSTALLED BY CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
 - DESIGN TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS. SEE DETAILS, SHEET 10 OF 10.
 - ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G. S. MEAN SEA LEVEL DATUM, 1929.
 - ALL FILL AREAS WITHIN ROADWAYS AND/OR UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% COMPACTION.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 - PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
 - SUBJECT PROPERTY ZONED R PER 08-02-85' COMPREHENSIVE ZONING PLAN.
 - TOPO SHOWN HEREON WAS FIELD RUN BY BOENDER ASSOCIATES ON 4/28/88.
 - NO PIPE SHALL BE LAID IN PLACE UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO WITHIN SIX (6) INCHES OF FINISHED GRADE ELEVATIONS.
 - ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.6 OF THE HOWARD COUNTY DESIGN MANUAL, VOL. 1, UNLESS OTHERWISE NOTED.



OWNER/DEVELOPER:
 MALLAN REA, JR.
 INGLETON-ON-MILES
 ROUTE 1, BOX 105
 EASTON, MD. 21601



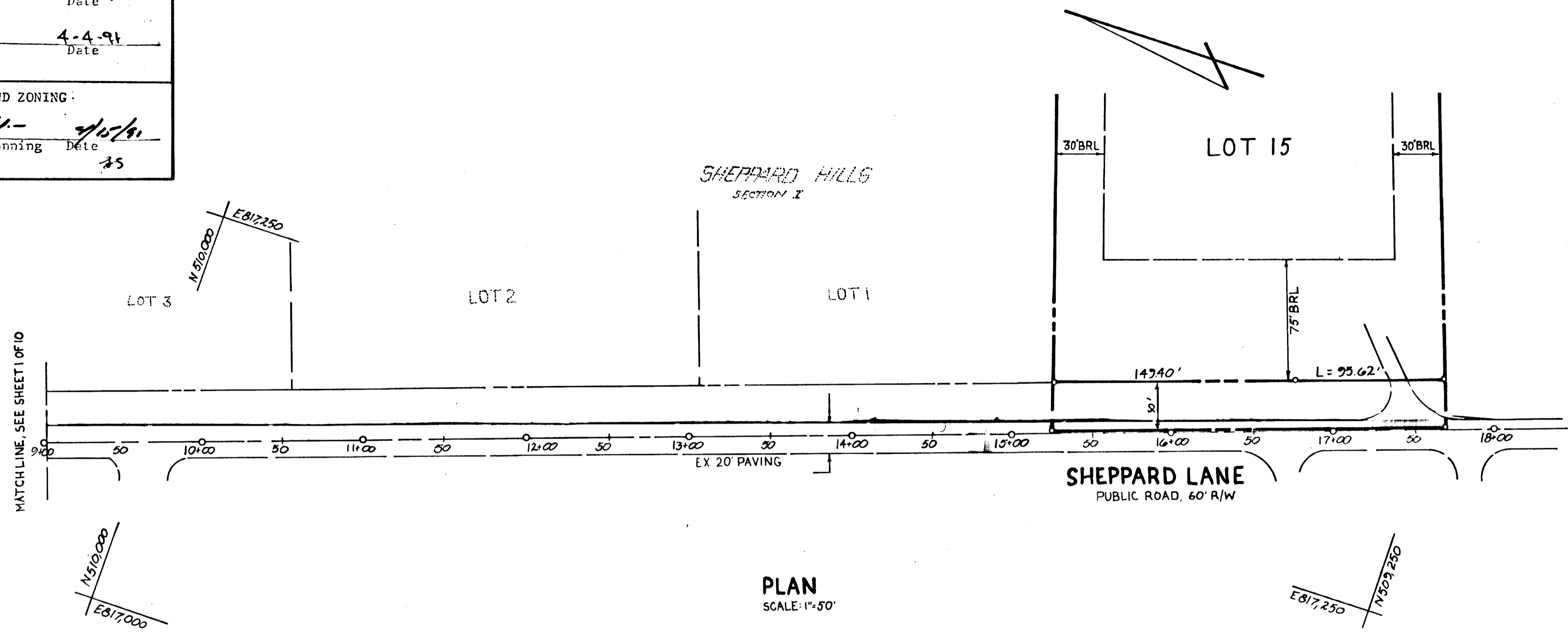
1629

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. Tegan 4/1/91
 Chief, Land Development Division Date
Francis W. Weikand 3/28/91
 Chief, Bureau of Highways Date
K. R. ... 4-4-91
 Chief, Bureau of Engineering Date

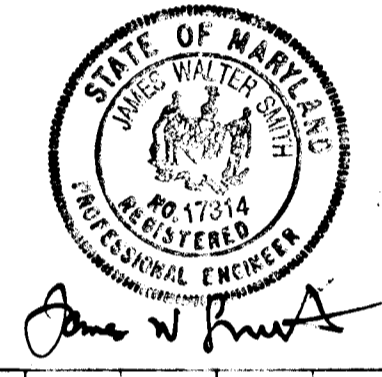
APPROVED: DEPARTMENT OF PLANNING AND ZONING
... S. ... 4/15/91
 Chief, Division of Community Planning And Land Development Date

BY	REVISION	DATE

PLAN
 NO. 1
 DATE
 BY
 REVISIONS
 CHECKED
 DATE



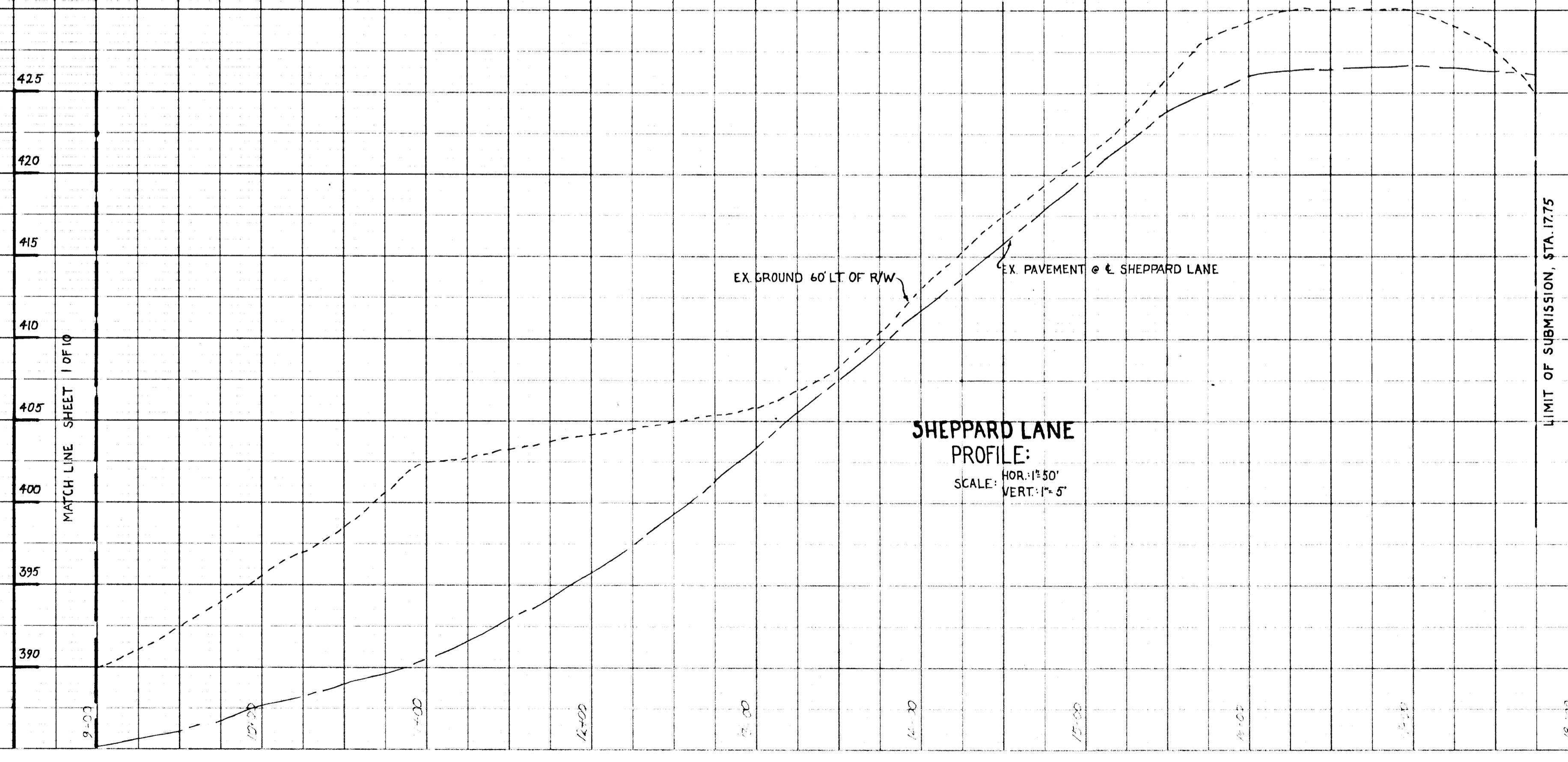
OWNER/DEVELOPER:
 MALLAN REA, JR.
 INGLETON - ON - MILES
 ROUTE 1, BOX 105
 EASTON, MD 21601



TITLE: ROAD CONSTRUCTION PLAN			
PROJECT: SHEPPARD HILLS SECTION II			
LOCATION: 5TH ELECTION DISTRICT HOWARD CO., MD.			
SCALE: AS SHOWN	DESIGNED BY: J.C.O.	DRAWN BY: L.E.B.	CHECKED BY: DATE: NOV. 1988
FIELD BOOK:	PAGE NO.: 86311	JOB NO.:	DRAWING NO.: 2 OF 10

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 land planners
 COURTHOUSE SQUARE
 3585 ELLICOTT MILLS DRIVE
 ELLICOTT CITY, MD. 21043
 (301) 465-7777

PROFILE
 NO. 1
 DATE
 BY
 REVISIONS
 CHECKED
 DATE



1620

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

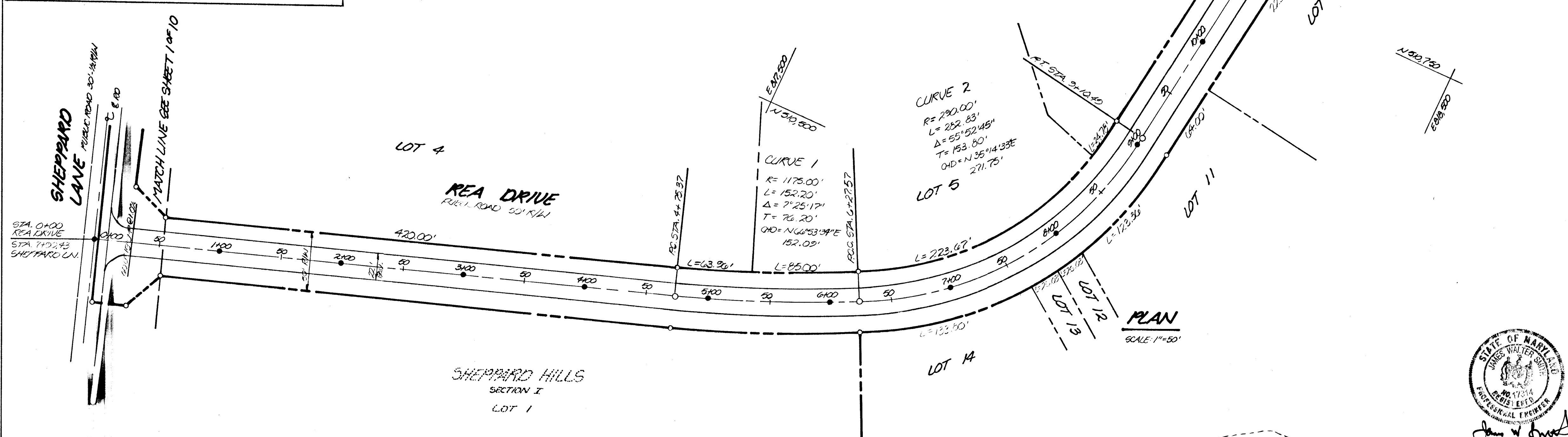
John M. Ryan 4/19
 Chief, Land Development Division
Lawrence W. Weiland 3/28/91
 Chief, Bureau of Highways
William S. Ray 4-4-91
 Chief, Bureau of Engineering

DATE	REVISION	BY

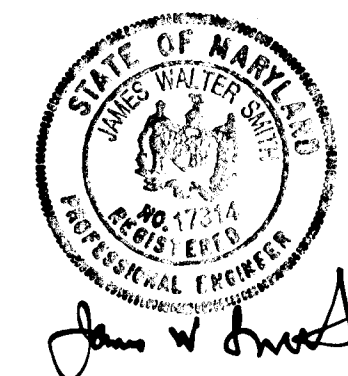
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mark S. Zinger 4/15/91
 Chief, Division of Community Planning
 And Land Development

PLAN	DATE



OWNER/DEVELOPER
 MALLAN REA, JR.
 JINGLETON-CO-MILES
 ROUTE 1, BOX 105
 EBOTON, MARYLAND 21601

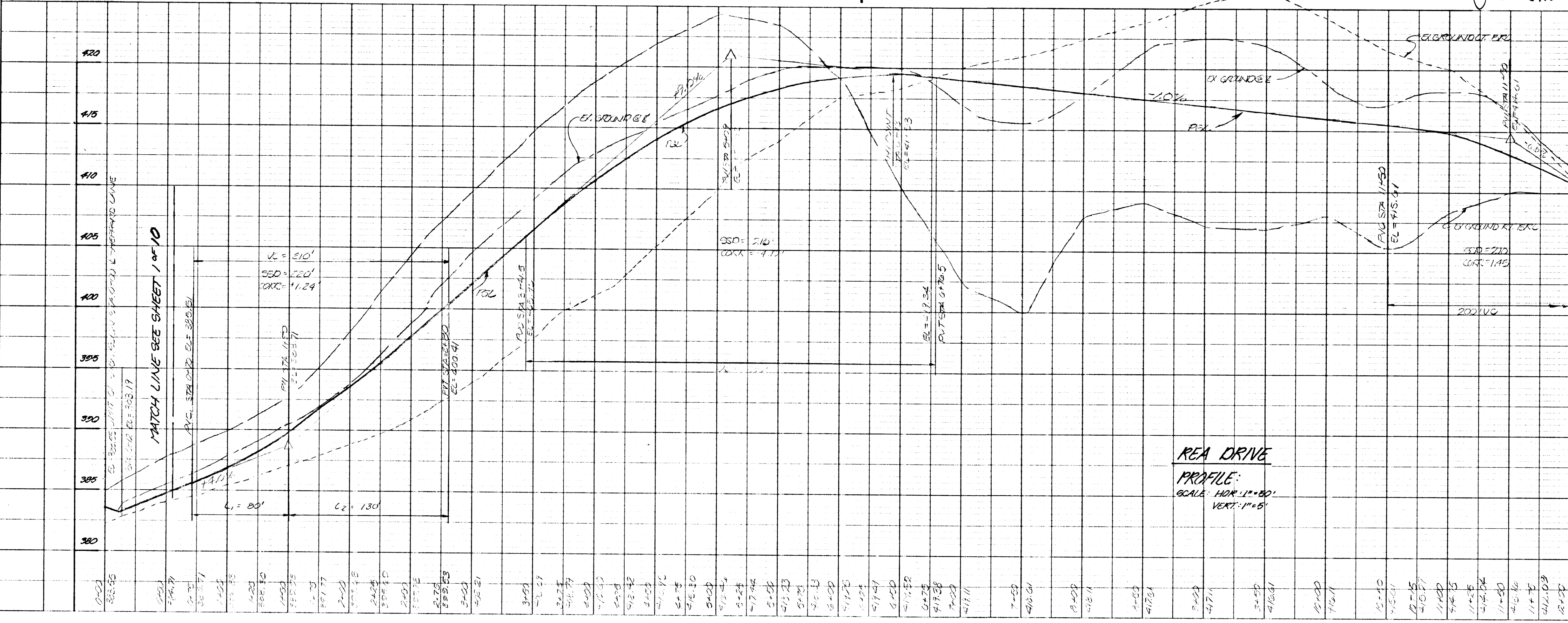


TITLE: ROAD CONSTRUCTION PLAN			
PROJECT: SHEPPARD HILLS SECTION II			
LOCATION: 5TH ELECTION DISTRICT HOWARD CO. MD.			
SCALE: AS SHOWN	DESIGNED BY: JCO	DRAWN BY: C.E.B.	CHECKED BY: DATE: NOV. 1990
FIELD BOOK:	PAGE NO.:	JOB NO.: 8631	DRAWING NO.: 3 OF 10

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 (301) 465-7777

PROFILE	DATE



1620

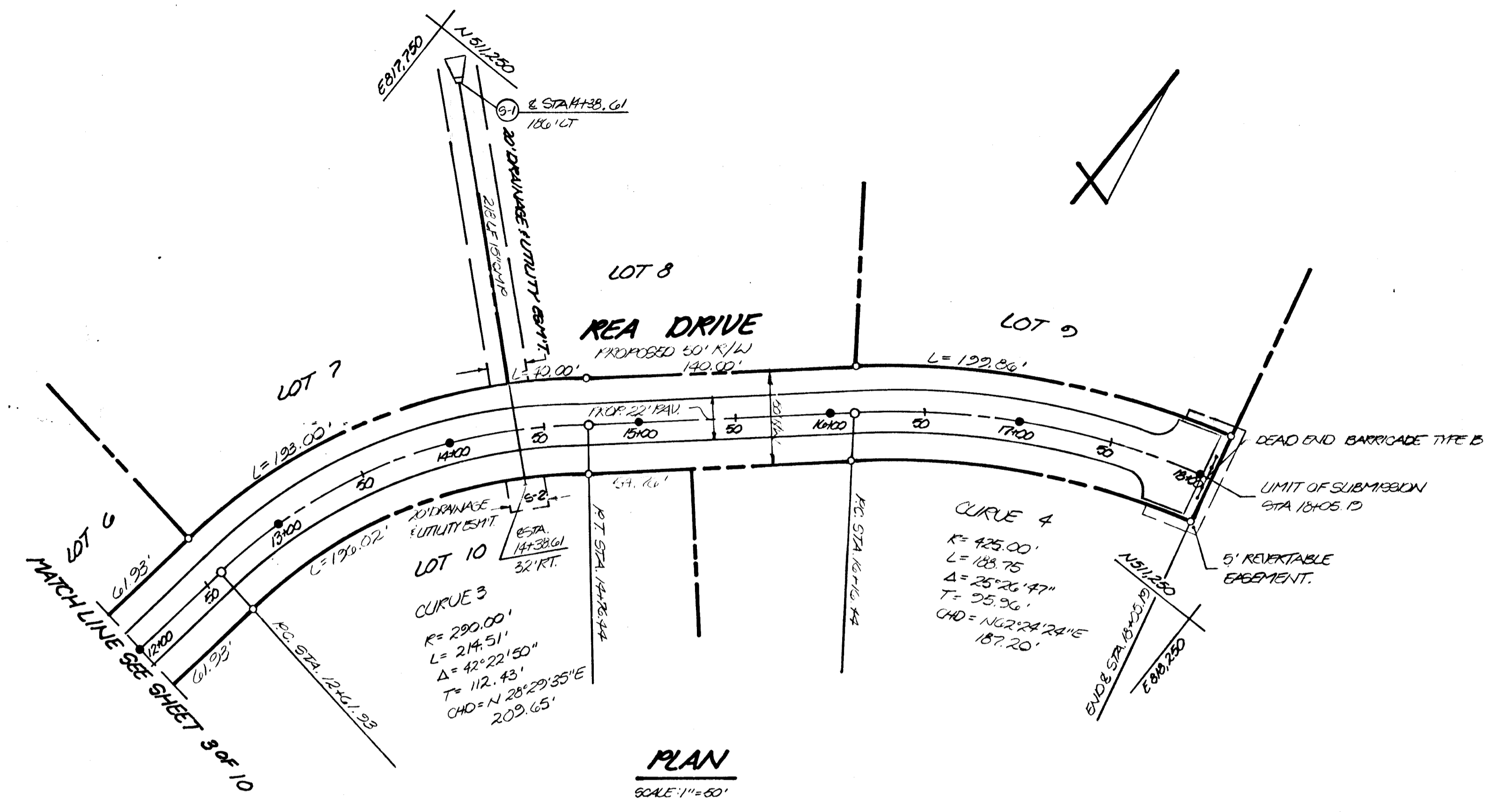
DATE	REVISION	BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. Torgan 4/1/91
 Chief, Land Development Division Date
Lawrence W. Weiland 3/28/91
 Chief, Bureau of Highways Date
W. S. ... 4.4.91
 Chief, Bureau of Engineering Date

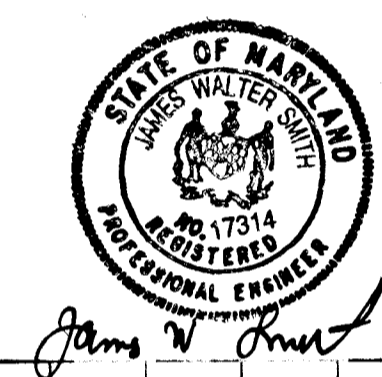
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mark J. ... 3/15/91
 Chief, Division of Community Planning Date
 And Land Development 35

DATE	BY	NO.

PLAN
 SURVEYED, PLOTTED, CHECKED, BY: OF WAY CHECKED, NO.



OWNER/DEVELOPER
 MALLAN REA, JR.
 INGLETON - CIV. MILLS
 ROUTE 1, BOX 105
 EASTON, MARYLAND 21601



TITLE: ROAD CONSTRUCTION PLAN			
PROJECT: SHEPPARD HILLS SECTION II			
LOCATION: 5 TH ELECTION DISTRICT HOWARD CO. MD.			
SCALE: AS SHOWN	DESIGNED BY: J.C.O.	DRAWN BY: L.E.B.	CHECKED BY: DATE: NOV, 1988
FIELD BOOK:	PAGE NO.:	JOB NO.: 86311	DRAWING NO.: 4 OF 10

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 (301) 465-7777

DATE	BY	NO.

PROFILE
 SURVEYED, PLOTTED, CHECKED, BY: OF WAY CHECKED, NO.



1620

DEVELOPER'S CERTIFICATE
 I 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DEVELOPER: J. Ch. Ogle (AGENT) DATE: 2-27-91

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

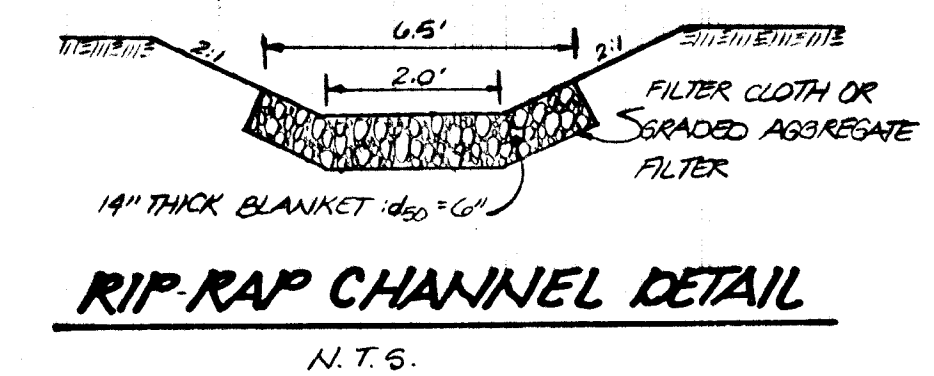
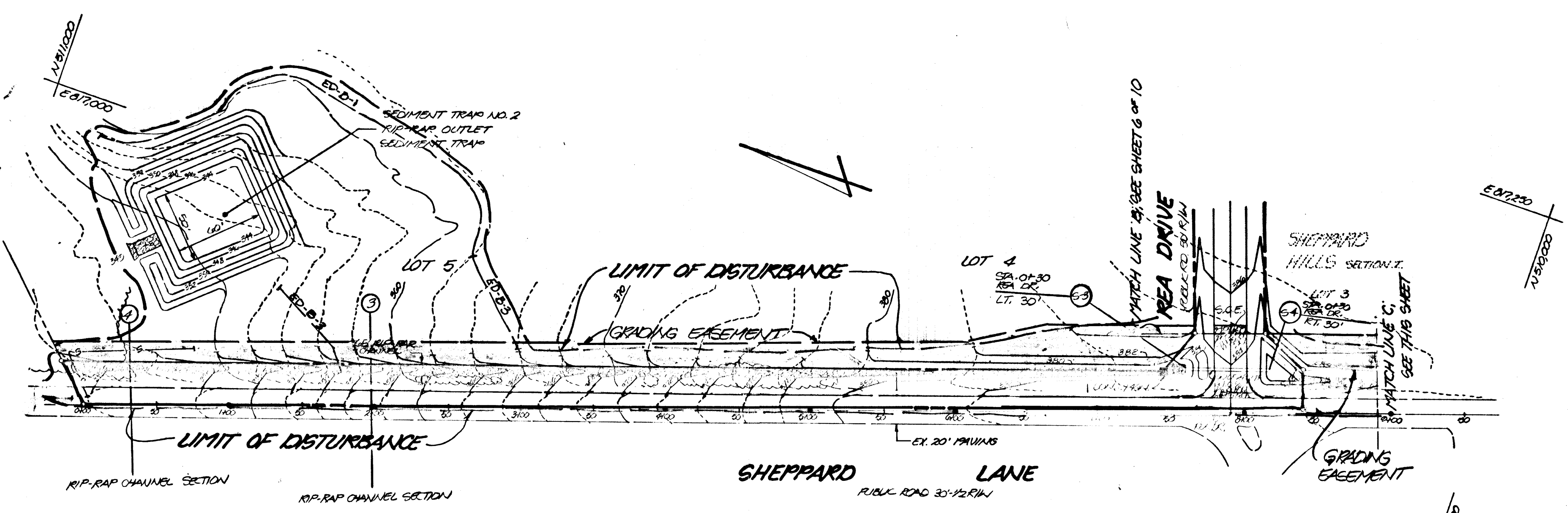
ENGINEER: John W. Brant DATE: 2-26-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Ol M. Togan DATE: 2/1/91
 Chief, Land Development Division
Francis W. Weiland DATE: 3/28/91
 Chief, Bureau of Highways
William E. Rely DATE: 4-4-91
 Chief, Bureau of Engineering

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John L. ... DATE: 4/15/91
 Chief, Division of Community Planning And Land Development

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
James M. Helm DATE: 3/6/91
 S.O. SOIL CONSERVATION DISTRICT

THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John F. ... DATE: 3/5/91
 S.O. SOIL CONSERVATION DISTRICT

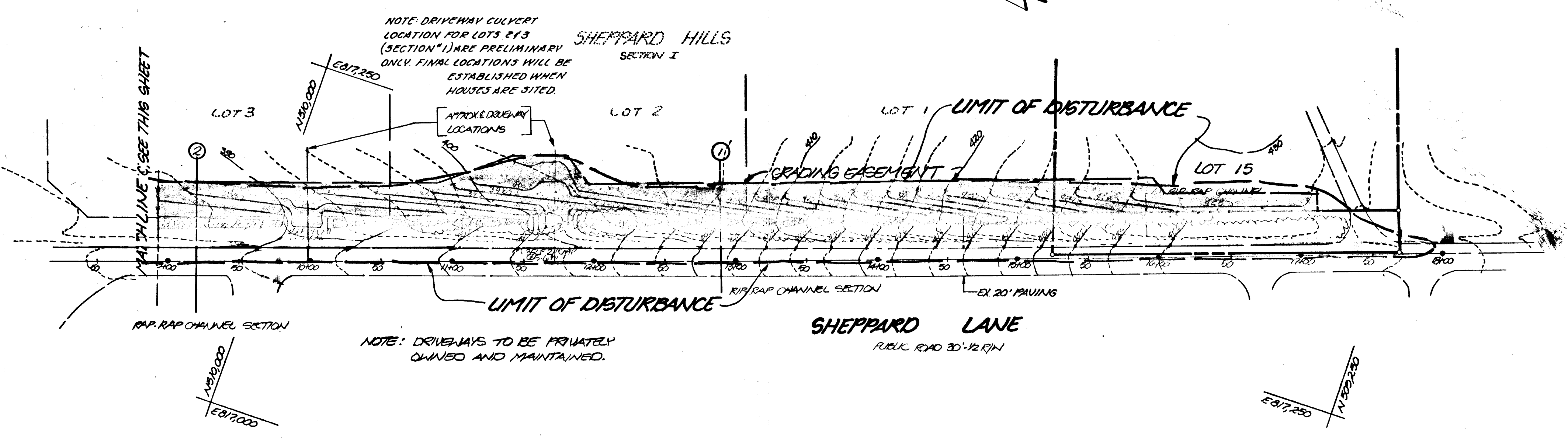


SECTION 1:
 $Q = 4.66$ CFS
 $S = 0.08$
 $n = 0.04$
 $V = 4.50$ FPS
 $d = 0.375'$
 $A = 1.03$ S.F.

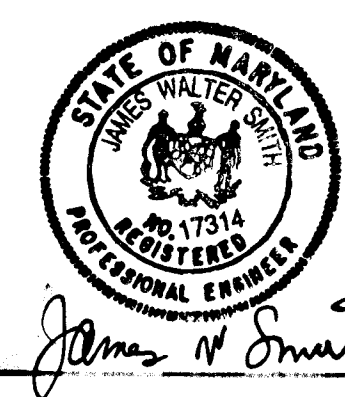
SECTION 2:
 $Q = 0.33$ CFS
 $S = 0.06$
 $n = 0.04$
 $V = 2.50$ FPS
 $d = 0.781'$
 $A = 2.732$ S.F.

SECTION 3:
 $Q = 22.77$ CFS
 $S = 0.10$
 $n = 0.04$
 $V = 7.04$ FPS
 $d = 0.817'$
 $A = 2.97$ S.F.

SECTION 4:
 $Q = 22.77$ CFS
 $S = 0.04$
 $n = 0.04$
 $V = 5.46$ FPS
 $d = 1.03'$
 $A = 4.15$ S.F.
 TOP WIDTH: 6.1'



OWNER/DEVELOPER:
 MALLON, REA, JR.
 INGLETON-ON-HILLS
 ROUTE 1, BOX 185
 EBOTON, MARYLAND 21601



TITLE: GRADING & SEDIMENT CONTROL PLAN				
PROJECT: SHEPPARD HILLS				
LOCATION: 5TH ELECTION DISTRICT HOWARD CO., MD.				
SCALE: 1"=50'	DESIGNED BY: L.E.B.	DRAWN BY: J.C.O.	CHECKED BY: L.E.B.	DATE: NOV. 1988
FIELD BOOK:	PAGE NO.:	JOB NO.: 06311	DRAWING NO.: 5 OF 10	

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 3565 ELLICOTT MILLS DRIVE
 ELLICOTT CITY, MD 21043
 (301) 465-7777

0291

DEVELOPER'S CERTIFICATE
 I 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DEVELOPER: J. Shultz DATE: 2-27-91

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

ENGINEER: John W. Pratt DATE: 2-26-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Ch. M. Tamm DATE: 2/1/91
 Chief, Land Development Division

Francis W. Weiland DATE: 3/18/91
 Chief, Bureau of Highways

J. Keenan & P. Kelly DATE: 4-4-91
 Chief, Bureau of Engineering

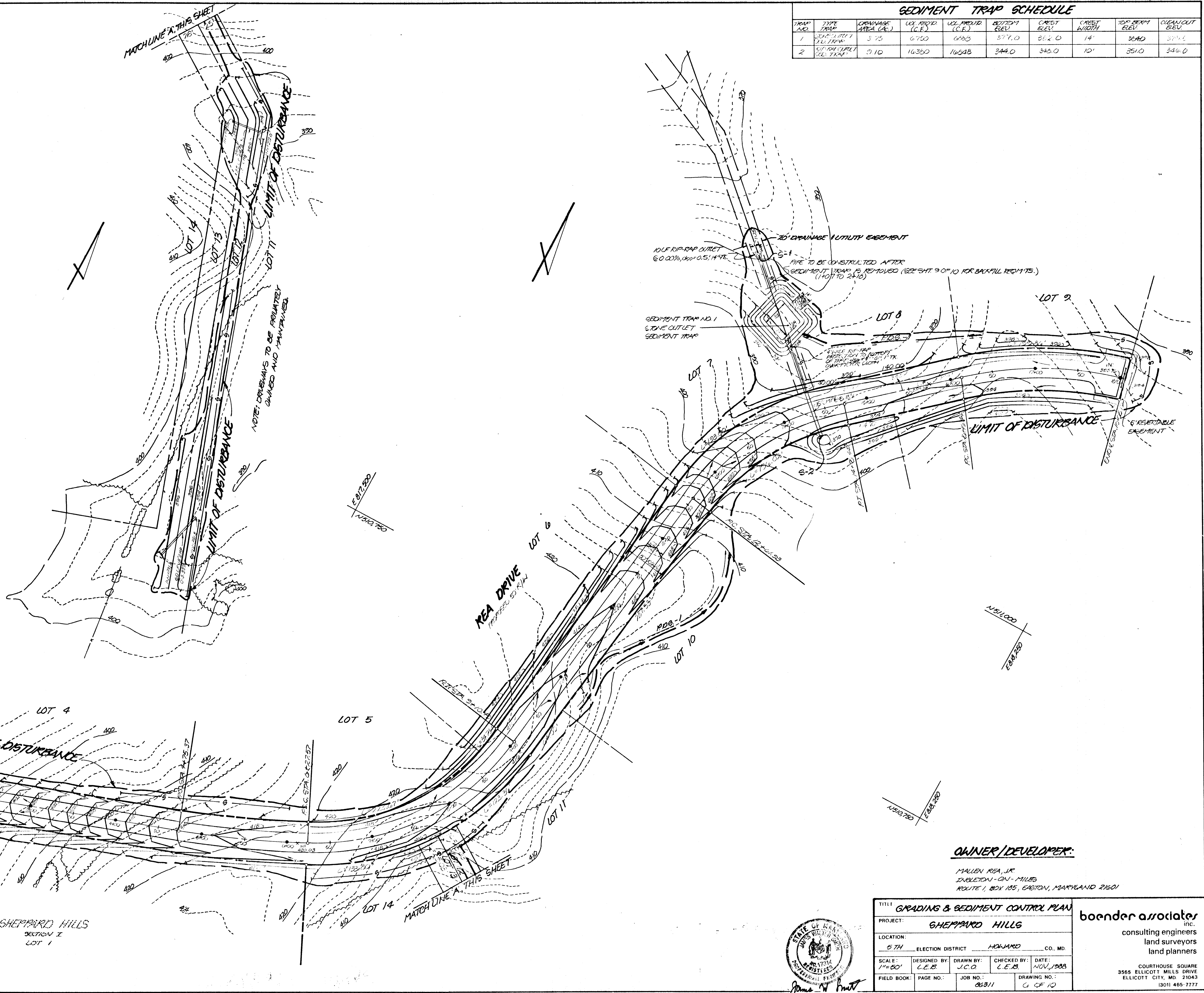
APPROVED: DEPARTMENT OF PLANNING AND ZONING
David V. D'Angelo DATE: 2/15/91
 Chief, Division of Community Planning And Land Development

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
James M. Helm DATE: 3/4/91
 SOIL CONSERVATION SERVICE

THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John L. Roberts DATE: 1/2/91
 SOIL CONSERVATION DISTRICT

SEDIMENT TRAP SCHEDULE

TRAP NO.	TYPE TRAP	DRAINAGE AREA (A.C.)	UL. REQ'D (C.F.)	UL. PROVIDED (C.F.)	BOTTOM ELEV.	CREST ELEV.	CREST WIDTH	TOP BERM ELEV.	CLEANOUT ELEV.
1	10' x 10' (10' x 10')	3.75	6.750	6.983	377.0	382.0	14'	384.0	377.0
2	10' x 10' (10' x 10')	7.10	16.350	16.548	344.0	349.0	10'	351.0	344.0



OWNER / DEVELOPER:
 MALLEN REA, JR.
 INGLETON - ON - MILES
 ROUTE 1, BOX 185, EASTON, MARYLAND 21601

TITLE: GRADING & SEDIMENT CONTROL PLAN

PROJECT: **SHEPPARD HILLS**

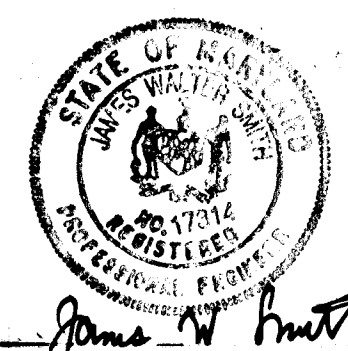
LOCATION: **5TH ELECTION DISTRICT HOWARD CO. MD.**

SCALE: **1"=50'** DESIGNED BY: **LEB** DRAWN BY: **JCO** CHECKED BY: **LEB** DATE: **NOV., 1988**

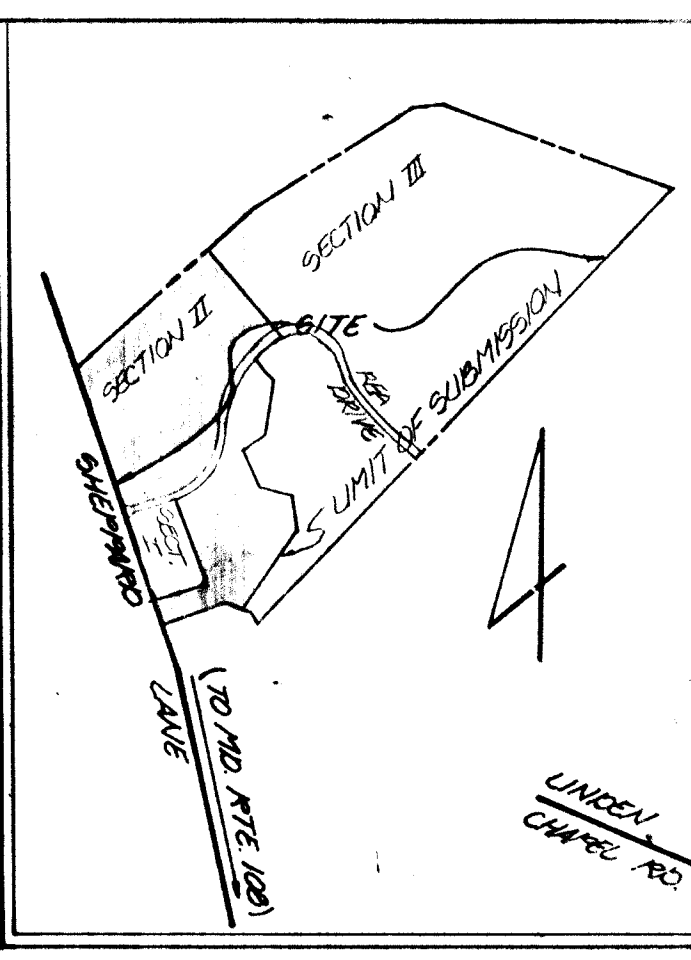
FIELD BOOK: PAGE NO.: JOB NO.: **06311** DRAWING NO.: **6 OF 10**

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 land planners

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 3565 ELLICOTT MILLS DRIVE
 ELLICOTT CITY, MD. 21043
 (301) 465-7777



0291



VICINITY MAP

SCALE: 1" = 1200'

GENERAL NOTES

1. TAX MAP 29, BLOCK 7, PARCEL: 170.25
2. DEED REFERENCE:
3. EXISTING ZONING: R
4. PRIVATE WATER AND PRIVATE SEWERAGE TO BE UTILIZED.
5. MINIMUM LOT SIZE: 3.00 AC.
6. TOTAL NO. OF LOTS: 11
7. TOTAL AREA OF LOTS: 46.716 AC.
8. TOTAL AREA OF ROAD DEDICATION: 2.103 AC.
9. TOTAL AREA OF OPEN SPACE: 0
10. TOTAL AREA OF FLOODPLAIN:
11. TOTAL AREA OF SLOPES 25% OR GREATER:
12. TOTAL AREA OF SLOPES 25% OR GREATER:
13. SEDIMENT CONTROL MEASURES TO BE PROVIDED ON FINAL ROAD CONSTRUCTION PLANS.
14. WETLANDS ON THIS PLAN HAVE BEEN FIELD LOCATED BY ROENDER ASSOCIATES ON 3/14/88.
15. FLOODPLAIN LOCATION IS BASED ON CAPITAL IMPROVEMENTS PROJECT NO. 10-1028.
16. SLOPES 25% OR GREATER SHOWN THUSLY.
17. SEE PRELIMINARY FOR CURRENT LOT CONFIGURATION, PERCOLATION AREAS.

HAROLD F. WILSON
204/335

- INDICATES DRAINAGE AREA
- INDICATES FIELD LOCATED WETLANDS
- T_c LINE

OWNER/DEVELOPER:

MALLAN REA, JR.
JANETON-ON-HILLS
ROUTE, BOX 185
EASTON, MARYLAND 21601

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John M. Torgon 4/1/88
 CHIEF, LAND USE & PLANNING DIVISION

APPROVED: DEPT. OF PLANNING & ZONING
Graville W. Wassard 3/28/91
 CHIEF, DIVISION OF PLANNING

APPROVED: DEPT. OF PLANNING & ZONING
Mark S. D'Angelo 4/10/91
 CHIEF, DIVISION OF PLANNING

0291

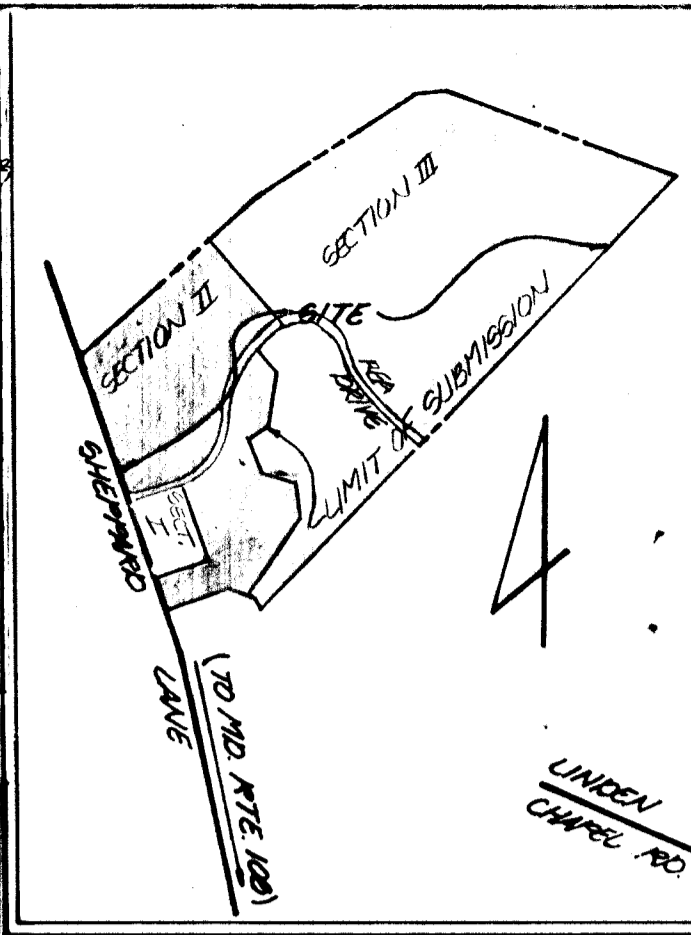


TITLE: DRAINAGE AREA MAP			
PROJECT: SHEPARD HILLS			
LOCATION: 5 TH. ELECTION DISTRICT HOWARD CO., MD.			
SCALE: 1" = 1200'	DESIGNED BY: J.K.B.	DRAWN BY: J.C.O.	CHECKED BY: C.E.B.
FIELD BOOK:	PAGE NO.:	JOB NO.:	DRAWING NO.:
		86311	OF 12

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 3565 ELLICOTT MILLS DRIVE
 ELLICOTT CITY, MD 21045
 (301) 465-2111

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Q. M. Tamm 4/19/91
 Chief, Land Development Division Date
Granville W. Wehland 3/28/91
 Chief, Bureau of Highways Date
W. C. ... 4-4-91
 Chief, Bureau of Engineering Date
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Wanda J. ... 4/10/91
 Chief, Division of Community Planning And Land Development Date



VICINITY MAP
 SCALE: 1" = 1200'

GENERAL NOTES

1. TAX MAP 20, BLOCK 7, PARCEL 170.25
2. DEED REFERENCE: T
3. EXISTING ZONING: R
4. PRIVATE WATER AND PRIVATE SEWERAGE TO BE UTILIZED
5. MINIMUM LOT SIZE: 3.00 AC.
6. TOTAL NO. OF LOTS: 11
7. TOTAL AREA OF LOTS: 46.712 AC.
8. TOTAL AREA OF ROAD DEDICATION: 2.103 AC.
9. TOTAL AREA OF OPEN SPACE: 0
10. TOTAL AREA OF FLOODPLAIN: 1
11. TOTAL AREA OF SITE: 1
12. TOTAL AREA OF SLOPES 25% OR GREATER:
13. SEDIMENT CONTROL MEASURES TO BE PROVIDED ON FINAL ROAD CONSTRUCTION PLANS
14. WETLANDS ON THIS PLAN HAVE BEEN FIELD LOCATED BY BOENDER ASSOCIATES ON 3/11/89.
15. FLOODPLAIN LOCATION IS BASED ON CAPITAL IMPROVEMENTS PROJECT NO. 10-1028.
16. SLOPES 25% OR GREATER SHOWN THICKLY FOR PREPARATION.
17. HOWARD COUNTY SOILS MAP NO. 18 USED FOR PREPARATION.
18. SEE PRELIMINARY PLAN FOR CURRENT LOT CONFIGURATION & REGULATION AREA.



HAROLD F. WILSON
 2/24/88

TARD INVESTMENT CORP.
 971 / 685

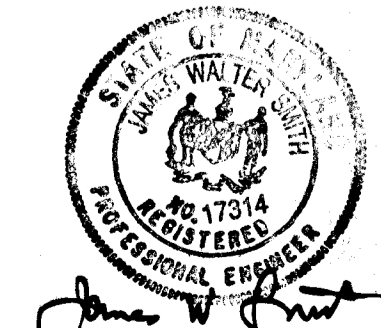
OWNER/DEVELOPER:

MALLAN REA, JR.
 INGLETON-QU-MILES
 ROUTE 1, BOX 105
 EASTON, MARYLAND 21601

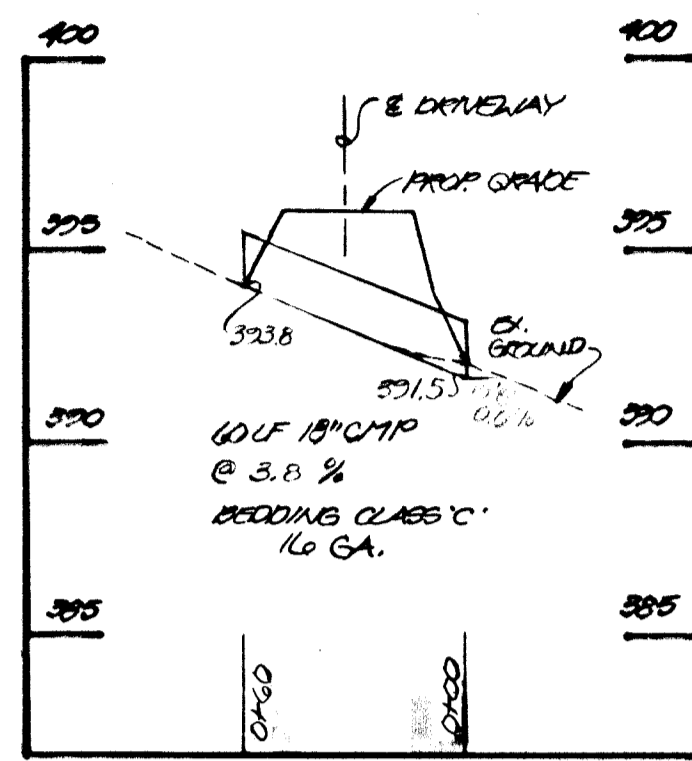
INDICATES HYDRIC SOILS
 INDICATES FIELD LOCATED WETLANDS

TITLE:	SOILS MAP		
PROJECT:	SHEPARD HILLS SECTION II		
LOCATION:	5 TH ELECTION DISTRICT HOWARD CO., MD.		
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
1" = 120'	J.R.G.	J.C.O.	C.E.B.
FIELD BOOK:	PAGE NO.:	JOB NO.:	DRAWING NO.:
		88311	OF 11

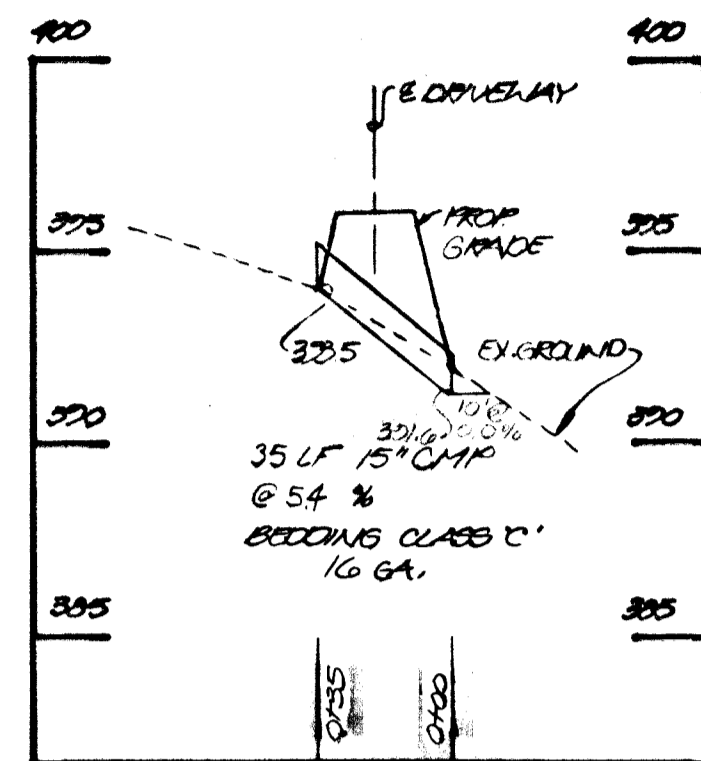
boender associates inc.
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 COURTHOUSE SQUARE
 3585 ELLICOTT MILLS DRIVE
 ELLICOTT CITY, MD. 21043
 (301) 465-7777



16291



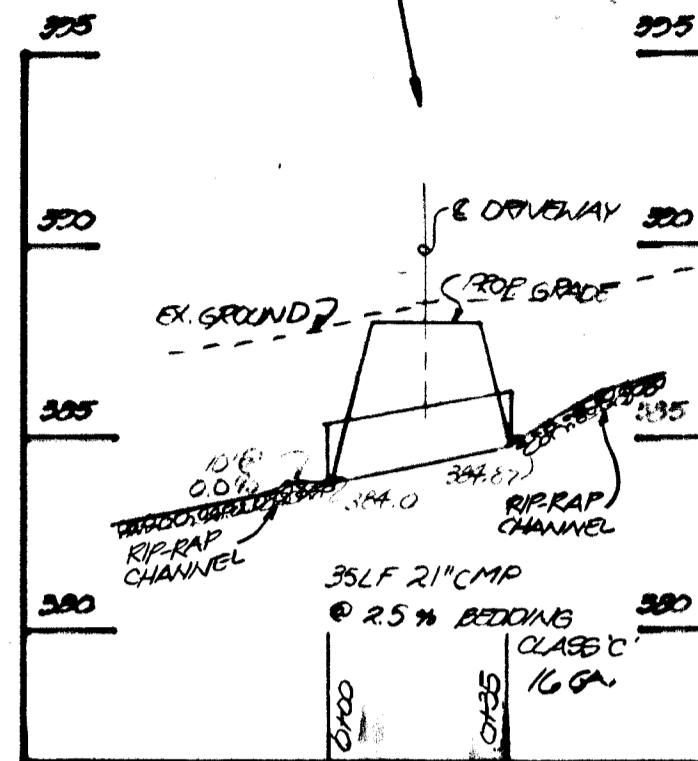
705 LF± FROM E REA DR.



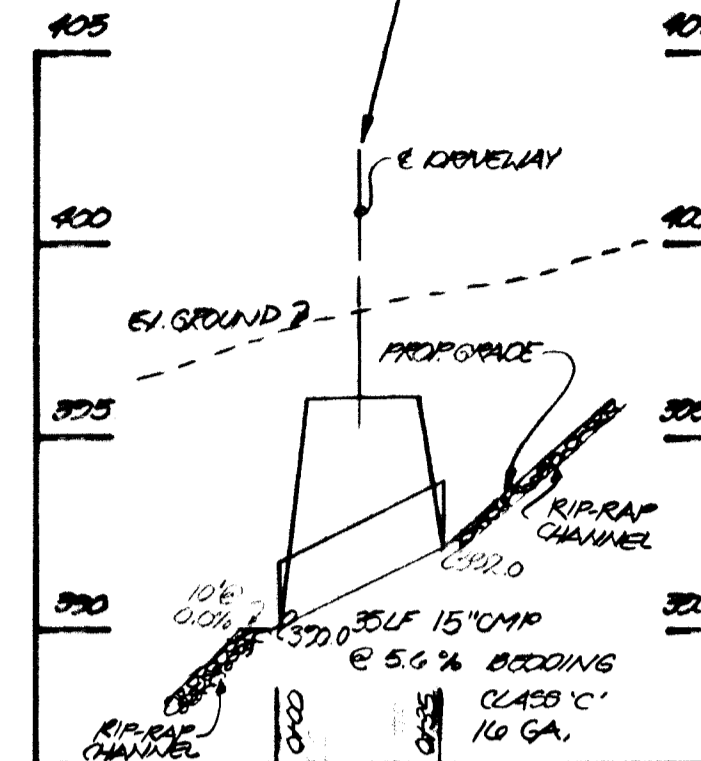
210 LF± FROM E REA DR.

PROFILES
LOTS 12 & 13 DRIVEWAY CULVERTS
SCALE: HOR. 1"=50'
VERT. 1"=5'

NOTE: DRIVEWAY CULVERTS TO BE PRIMARILY QUINNED AND MAINTAINED.

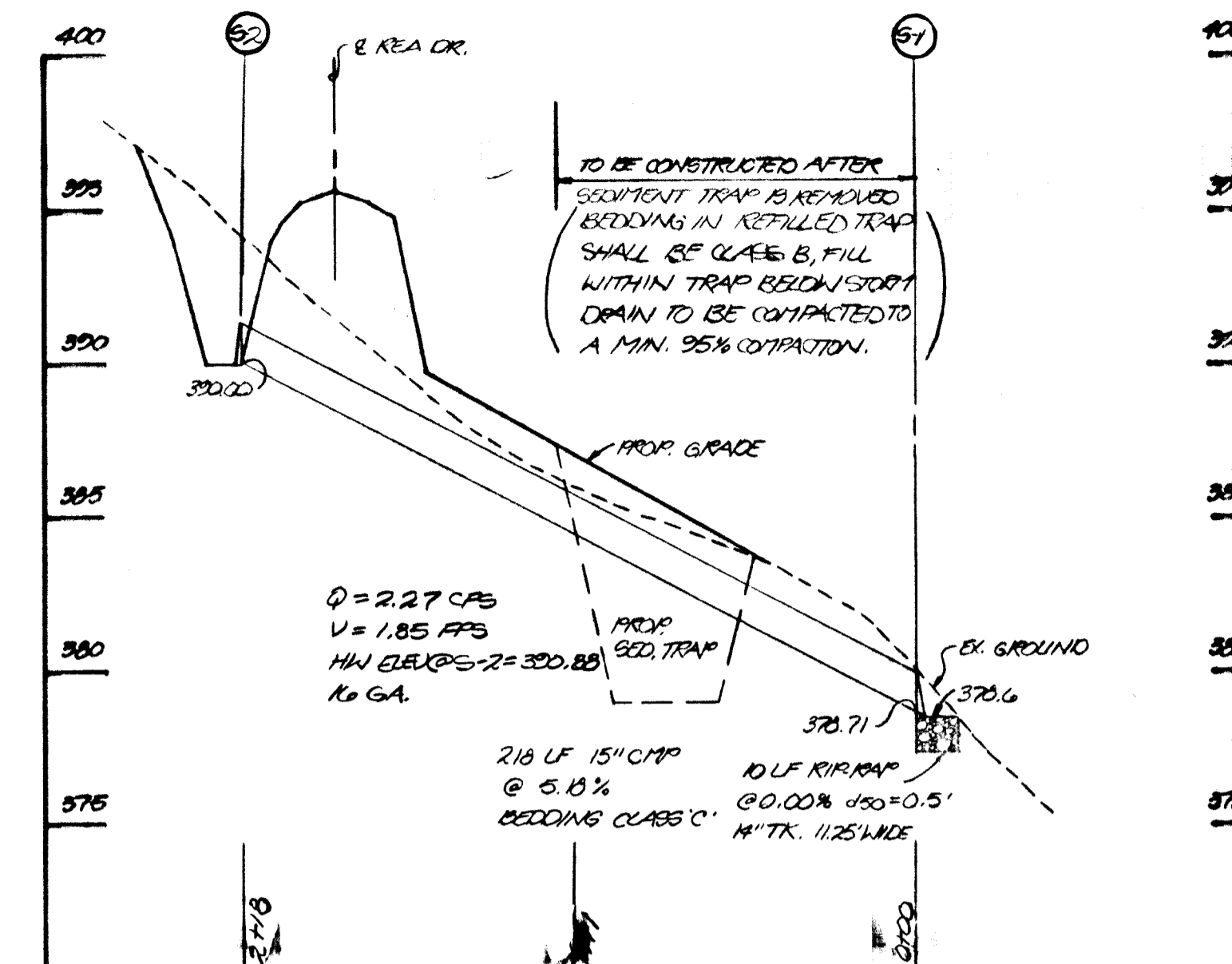


LOT 3



LOT 2

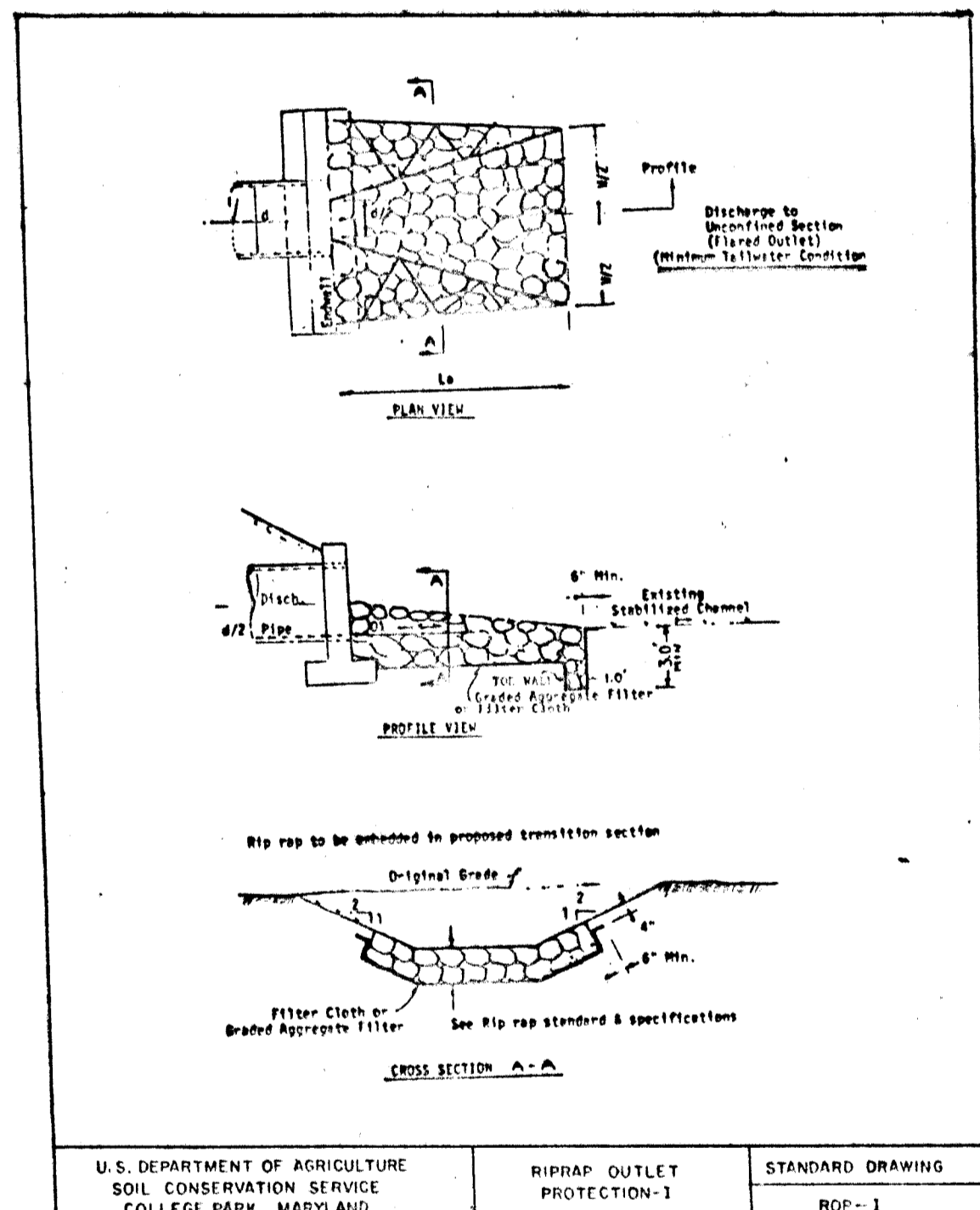
PROFILES
SHEPPARD LAKE DRIVEWAY CULVERTS
SCALE: HOR. 1"=50'
VERT. 1"=5'



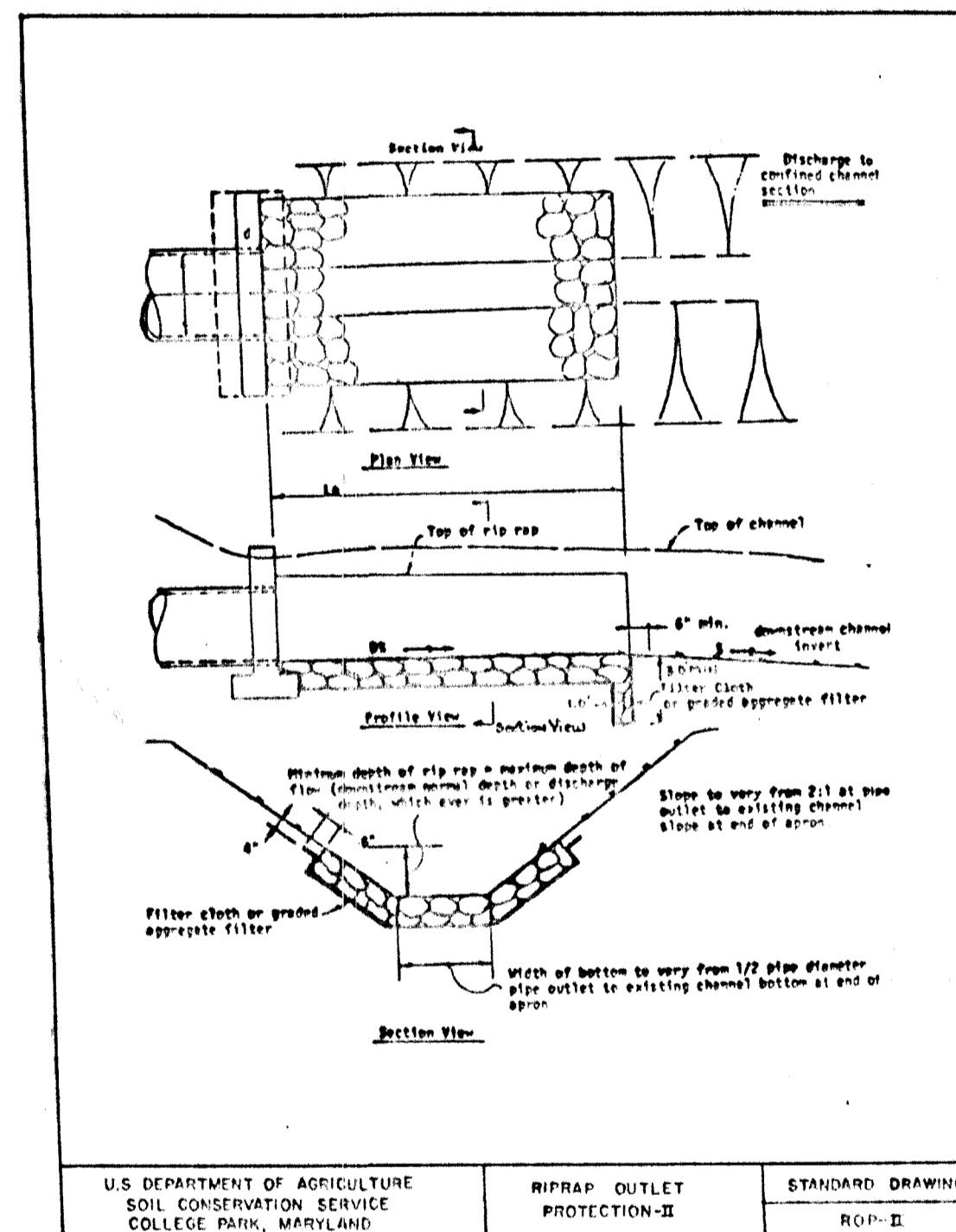
CULVERT @ STA. 14+35 - REA DR.

PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'

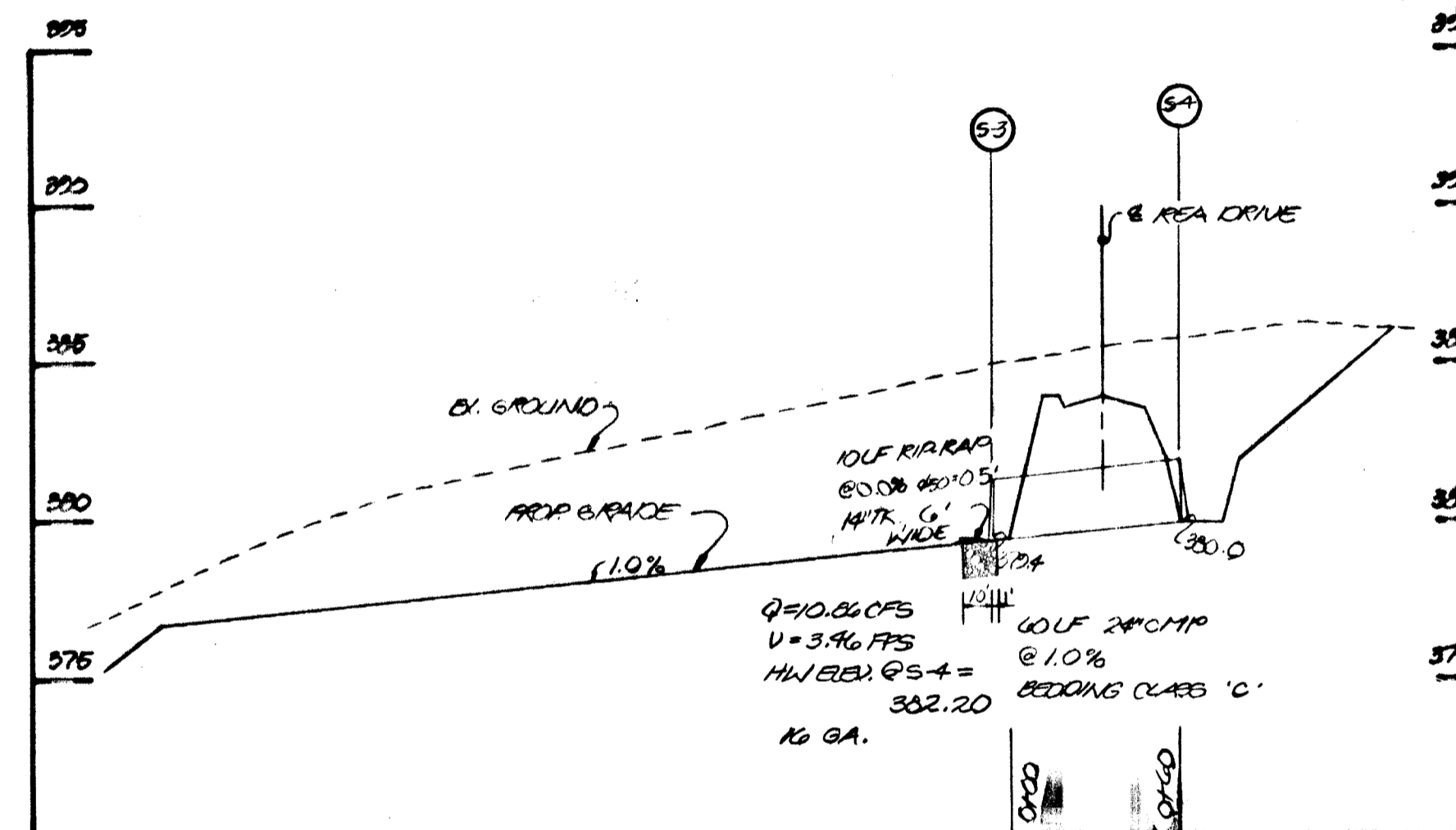
- RIP-RAP OUTLET PROTECTION**
- CONSTRUCTION SPECIFICATIONS**
- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
 - The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
 - Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
 - Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.



NOTE: ROP-I - STORM DRAIN OUTLET @ S-1 & S-3



NOTE: ROP-II - STORM DRAIN OUTLET @ INT. RPA DR. & SHEPPARD LA.



CULVERT @ STA. 0+30 - REA DR.

PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'

STAKE	STRUCTURE	SCHEDULE	DATE	DETAIL AD.
S-2	TRIAL CURVE	300.0	3/12/91	5.61
S-1	"	378.71	3/29/91	6.61
S-4	"	320.0	3/20	6.61
S-3	"	379.4	3/14	5.01

0291

REVIEWED FOR HOWARD S.C.D. AND METS TECHNICAL REQUIREMENTS.
James M. Hela / JMH 3/6/91
THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN BY THE HOWARD SOIL CONSERVATION DISTRICT.
John K. Roberts / JKR 3/5/91

DEVELOPER'S CERTIFICATE
I 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
J. Ch. Cofrancesco / JCC 2-27-91
CERTIFICATE
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
James W. Swartz / JWS 2-26-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John T. Long / JTL 4/1/91
Crawville W. Weiland / CWW 3/28/91
William E. Riley / WER 4-4-91
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mark U. Taylor / MUT 4/10/91

OWNER/DEVELOPER:
MILLER REA, JR.
JANETON-ON-HILLS
ROUTE 1, BOX 185
EASTON, MARYLAND 21601

boender associates, inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3555 ELLICOTT HILLS DRIVE
ELLICOTT CITY, MD 21045
8301 465-7772

TITLE: STORM DRAIN PROFILES
PROJECT: SHEPPARD HILLS
LOCATION: S 7th ELECTION DISTRICT, HAZARD CO., MD
SCALE: AS SHOWN
DESIGNED BY: J.C.C.
DRAWN BY: J.C.C.
CHECKED BY: J.C.C.
DATE: NOV. 1990
FIELD BOOK: 25371
PAGE NO.: 25371
JOB NO.: 25371
DRAWING NO.: 25371

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

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 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 (25 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 1 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

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

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

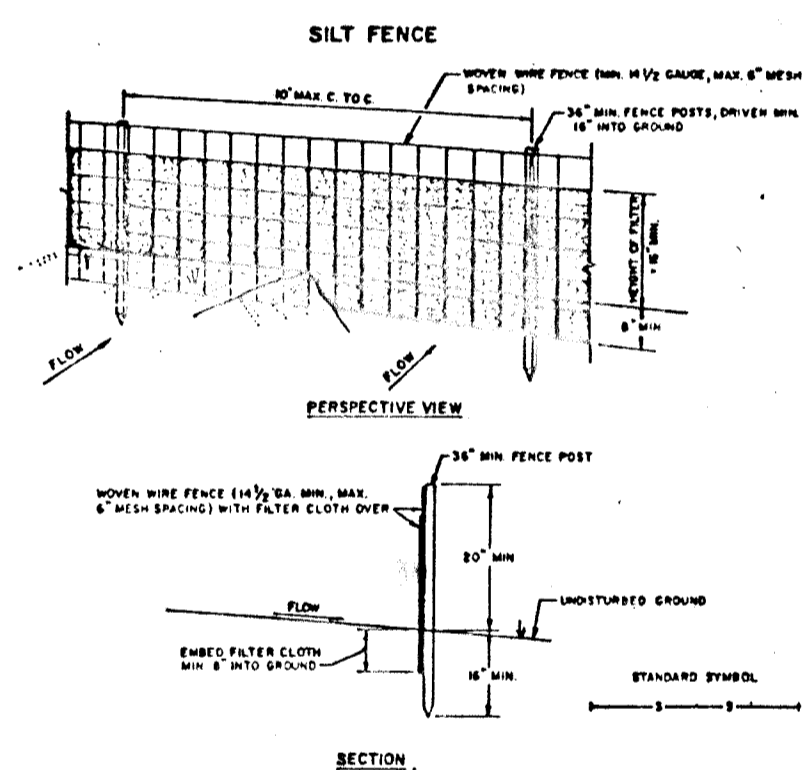
Seedbed Preparation: Loosen up three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

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

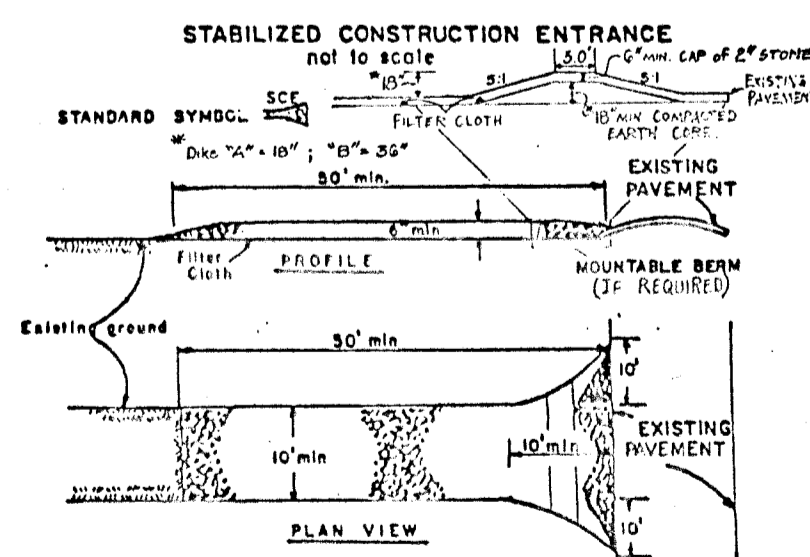
Seeding - For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre (5 gal/1000 sq. ft.) of weeping lovegrass (0.7 lbs/1000 sq. ft.). For the period November 15 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 670 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 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.



- CONSTRUCTION SPECIFICATIONS FOR PREPARED SILT FENCE**
1. Move wire fence to be fastened securely to fence posts with wire ties or staples.
 2. Filter cloth to be fastened securely to stone wall with wire ties or staples every 2' at top and mid section.
 3. When two sections of filter cloth abut, each corner they shall be overlapped by six inches and folded.
 4. Maintenance shall be performed as needed and material removed when needed.
- POSTS: STEEL EIGHT T OR U TYPE OR 2" HORIZONTAL
FENCE: 20# WIRE, 14 GA., 2' PAUL, NEW DRIVING
FILTER CLOTH: FILTERS
NEW LINO, STAINLESS LINING, 100% OR APPROVED
PREPARED UNIT: GEOTEX, AUTOPROTECT, OR APPROVED EQUIV.

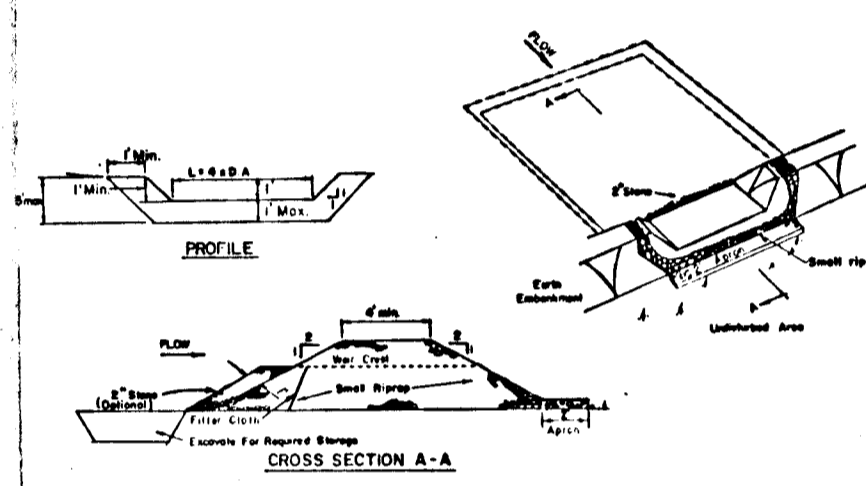


- CONSTRUCTION SPECIFICATIONS**
1. Stone Size - The 2' stone, as indicated on required concrete equivalent.
 2. Length - As required, but not less than 50 ft. (except on a single residence lot where a 30 ft. minimum length would apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - Ten (10) ft. minimum, but not less than the full width at points where ingress or egress occurs.
 5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
 6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a portable boom with 3/4" screen will be provided.
 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment into public right-of-way. This may require periodic maintenance with additional stone as conditions demand and repairs and/or closure of any repairs used to stop sediment. All sediment applied, stored, washed or tracked into public right-of-way must be removed immediately.
 8. Washing - Washes shall be cleaned to remove sediment which is retained on public right-of-way. When washing is required, it shall be done in an area established with stone and wash drains into an approved sediment trapping device.
 9. Periodic inspection and required maintenance must be provided after each rain event.

SEDIMENT CONTROL NOTES

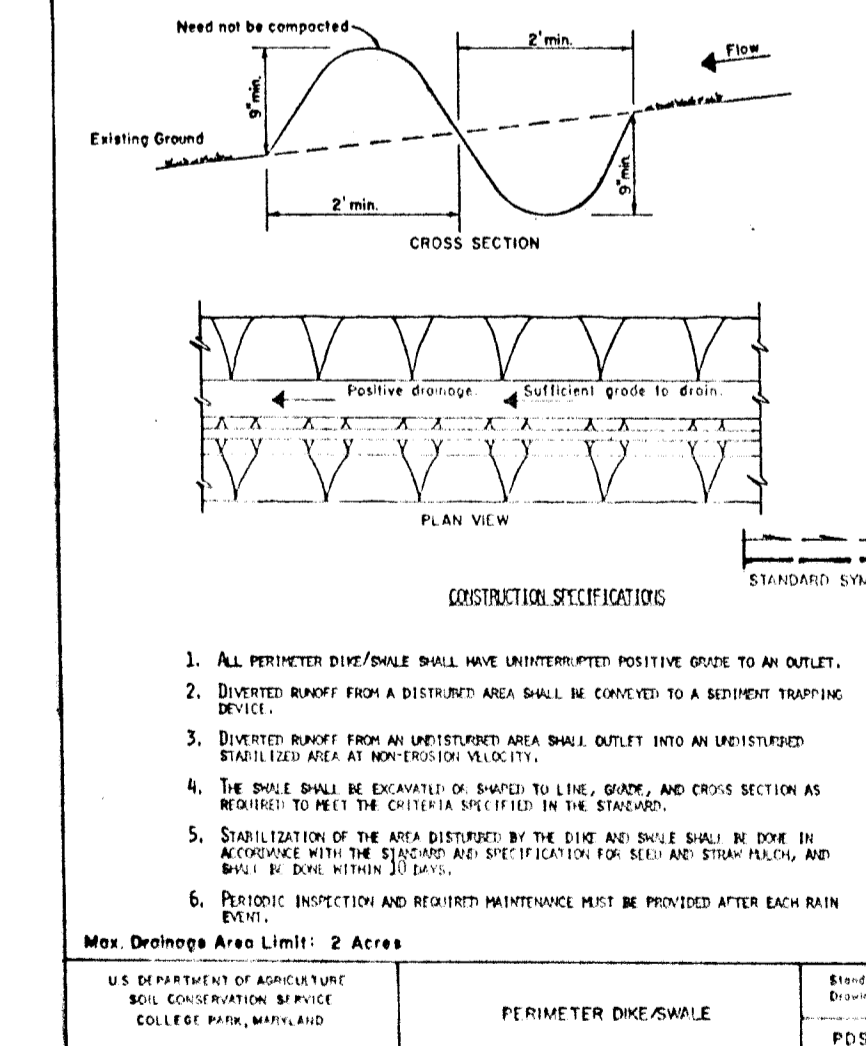
- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permitting prior to the start of any construction. (192-2437)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, ditches, perimeter slopes and all slopes greater than 3:1, b) 14 days on 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, Slope Treatment.
- 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. 313 and Sec. 341). Temporary seedings (Sec. 303) and mulching (Sec. 317). Temporary stabilization with sod 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 1 year after their installation. Has been obtained from the Howard County Sediment Control Inspector.
- 7) Site Analysis:
 - Total Area of Site: 20.05 Acres
 - Area to be graded or paved: 2.17 Acres
 - Area to be vegetatively stabilized: 17.88 Acres
 - Total Cut: 10,176 Cu.Yds.
 - Total Fill: 10,176 Cu.Yds.
 - Off-site waste/borrow area location: Co.16a
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be required 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 substituted for this required approval by the inspection agency as is.

STONE OUTLET SEDIMENT TRAP

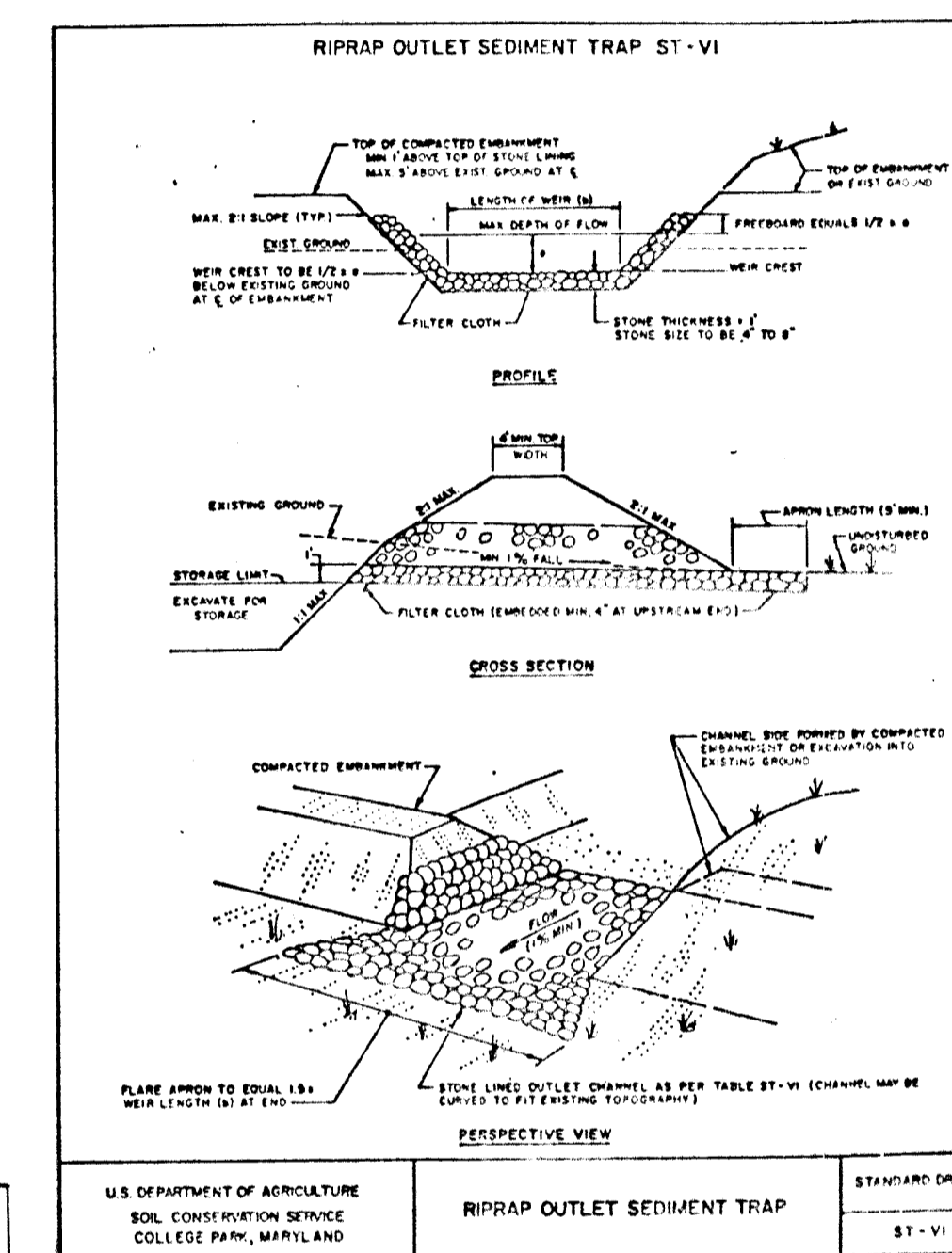
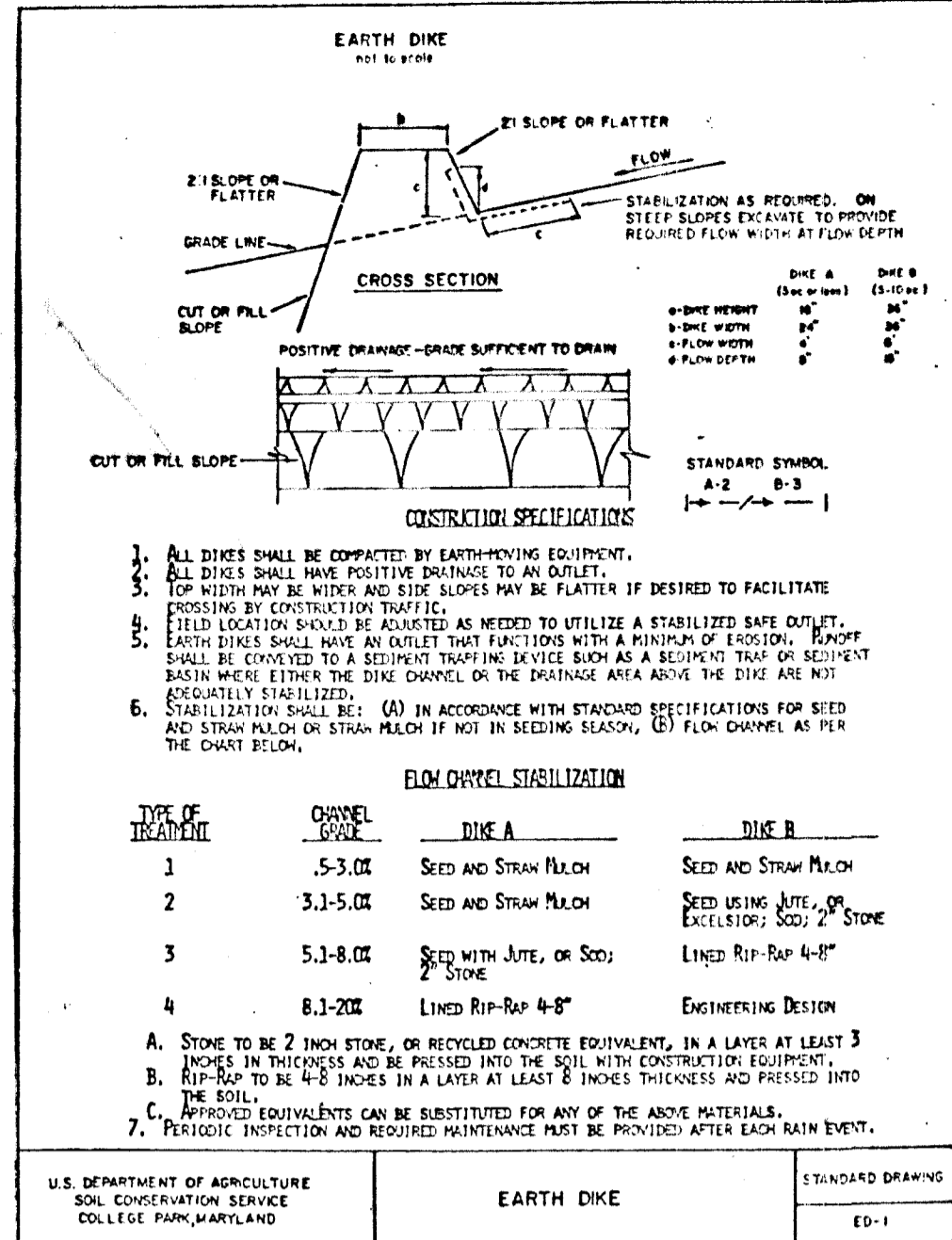


- CONSTRUCTION SPECIFICATIONS FOR STONE OUTLET SEDIMENT TRAP**
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized 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 well sorted 4" to 8" along with a 1" thickness of 1/2" aggregate placed on the upstream side of the stone filter cloth.
 5. Sediment shall be removed and trap returned to its original dimensions when the sediment has accumulated to the design depth of the trap.
 6. The structure shall be inspected after each rain and repairs made 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.

PERIMETER DITCH/SWALE



- CONSTRUCTION SPECIFICATIONS**
1. All perimeter ditch/swales shall have unimpaired positive grade to an outlet.
 2. Diverted runoff from a disturbed area shall be conveyed to a sediment trapping device.
 3. Diverted runoff from an undisturbed area shall outlet into an undisturbed stabilized area at non-erosion velocity.
 4. The ditch shall be equipped with a stone filter cloth and cross section as required to filter the sediment in the ditch.
 5. Stabilization of the area disturbed by the ditch and swale shall be done in accordance with the required and specifications for seed and straw mulch, and sod by 14 days within 30 days.
 6. Periodic inspection and required maintenance must be provided after each rain event.



CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT
2. NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS & PERMITS AND THE CONSTRUCTION INSPECTING BUREAU DIVISION AT (301) 782-7272 AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY MSO UTILITY AT 552-0100 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
3. INSTALL TEMPORARY SEDIMENT CONTROL MEASURES (S.E., S.F., S.T., S.D., ED-1) AND SIMULTANEOUSLY INSTALL ROAD CULVERTS. 2 WEEKS
4. CLEAR & GRADE SITE 2 WEEKS
5. GRADE SLOPES AND STABILIZE DISTURBED AREAS AS SPECIFIED 2 WEEKS
6. BRING ROAD TO GRADAGE 1 WEEK
7. CONSTRUCT BARRICADE END OF TEE TURN-AROUND 2 DAYS
8. PAVE ROAD 1 WEEK
9. FINE GRADE SITE AND VEGETATIVELY STABILIZE DISTURBED AREAS - AS REQUIRED 1 WEEK
10. WITH APPROVAL OF HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS, REMOVE TEMPORARY SEDIMENT CONTROL MEASURES AND STABILIZE REMAINING DISTURBED AREAS 1 WEEK

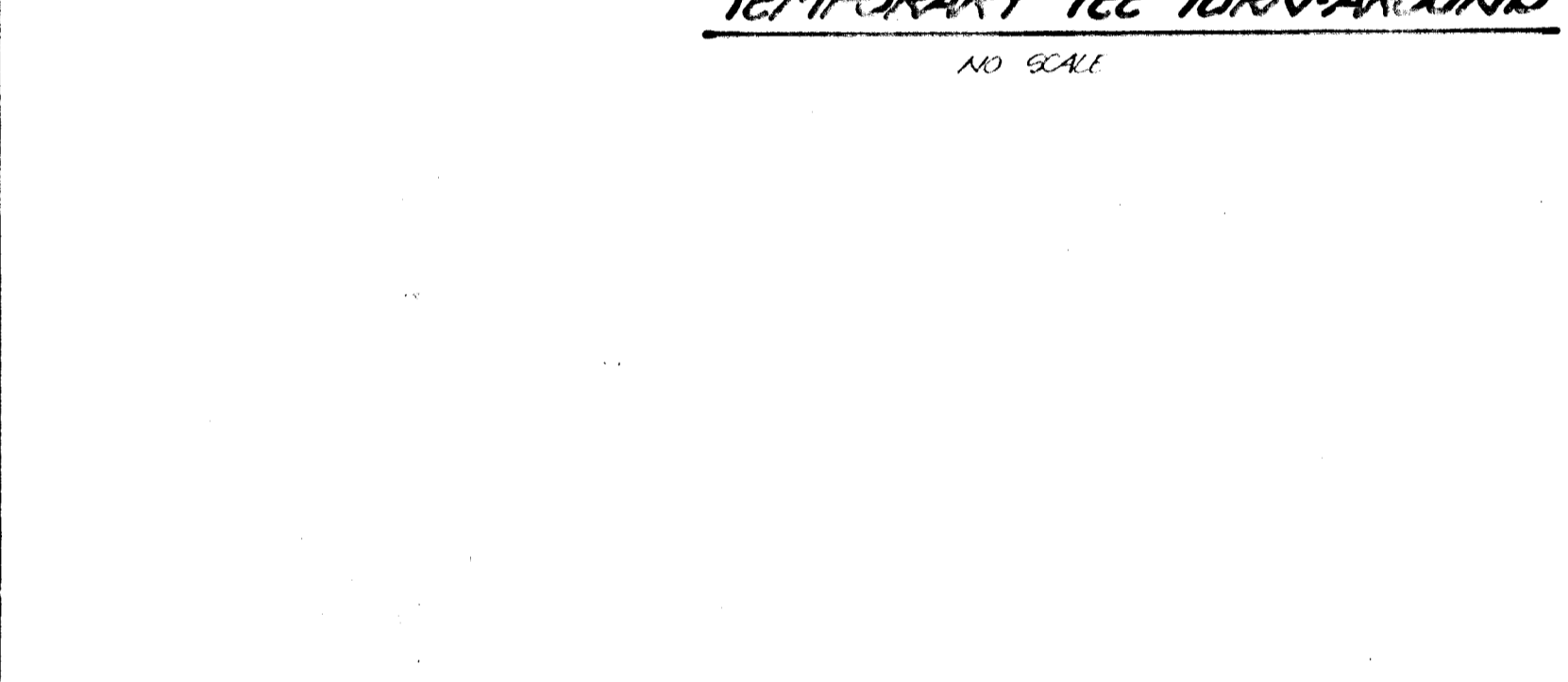
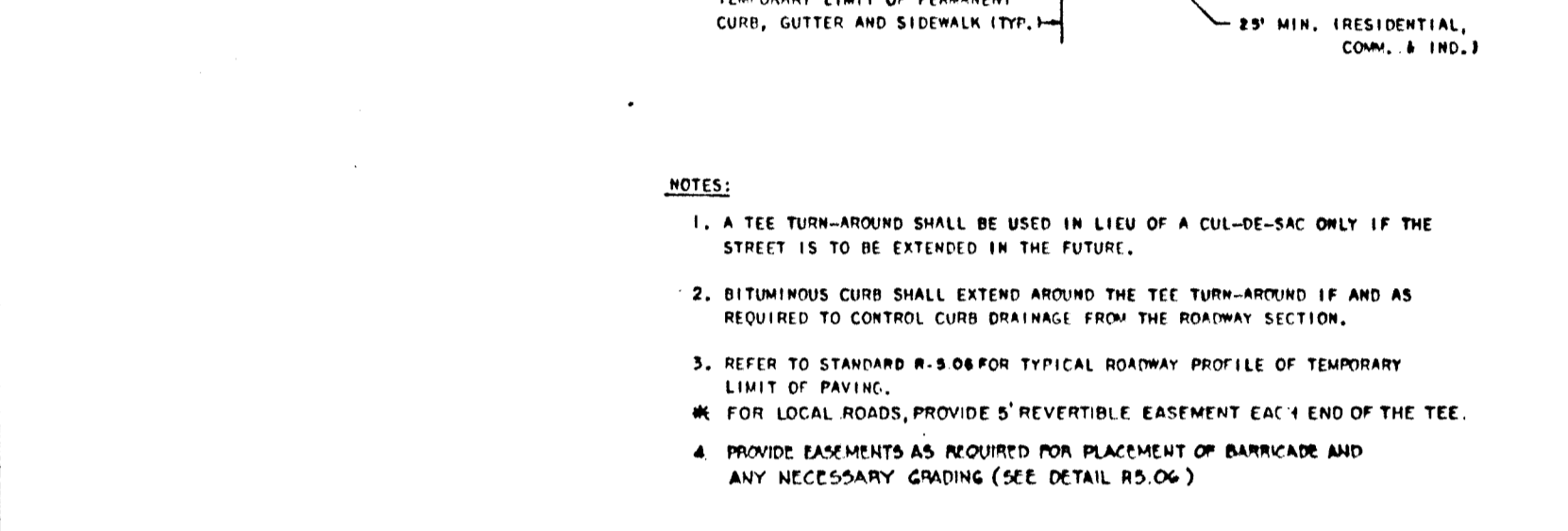
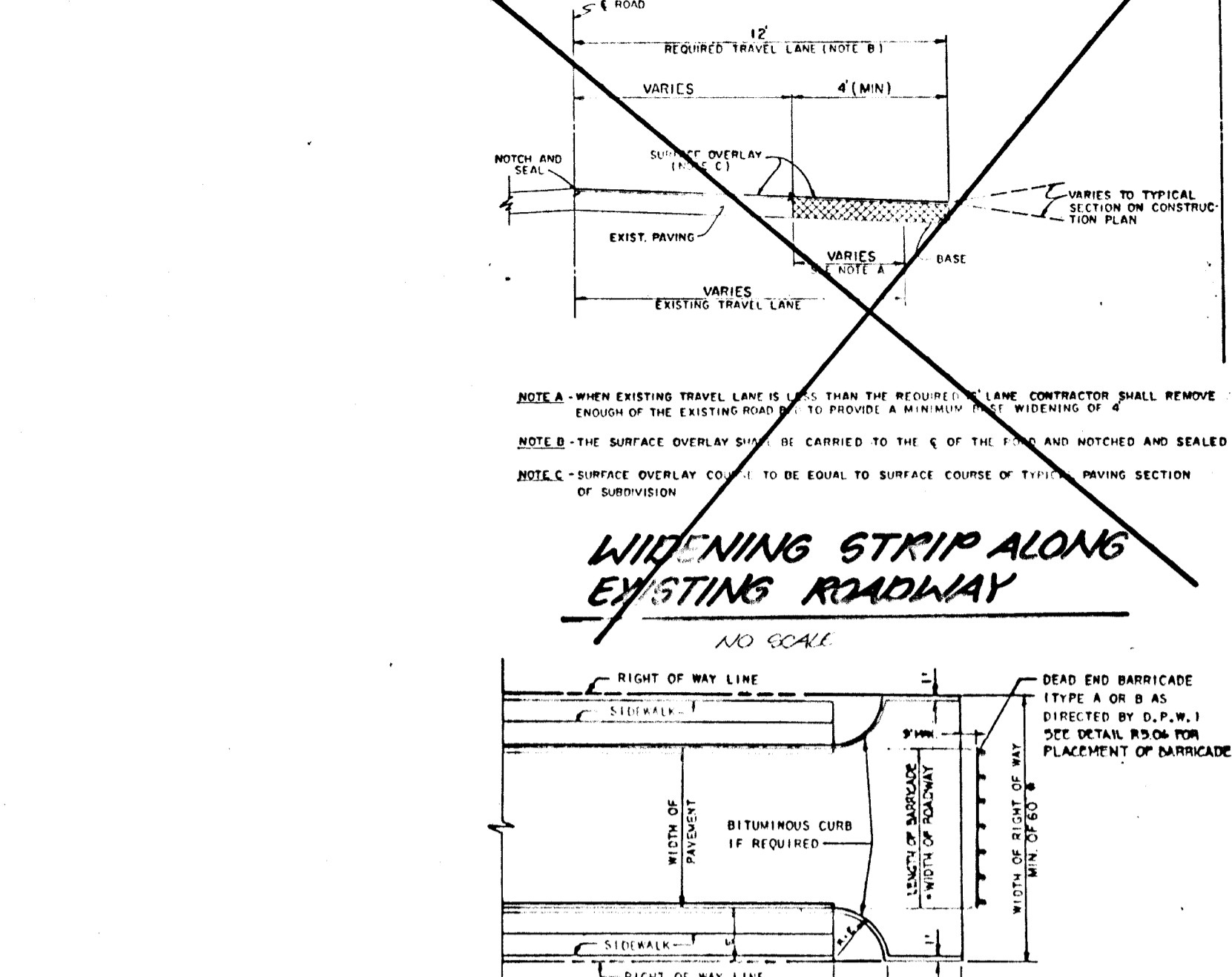
STATE OF MARYLAND
DEPARTMENT OF PUBLIC WORKS
OFFICE OF PERMITS AND INSPECTIONS

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
James M. Allen 3/6/91

THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 3/5/91

DEVELOPER'S CERTIFICATE
I 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR ITS AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
D. Ch. O'Connell 2-27-91

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I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
James W. Smith 2-26-91



- CONSTRUCTION SEQUENCE**
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-5 OR 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 GUIDING (SEE DETAIL R5-06)

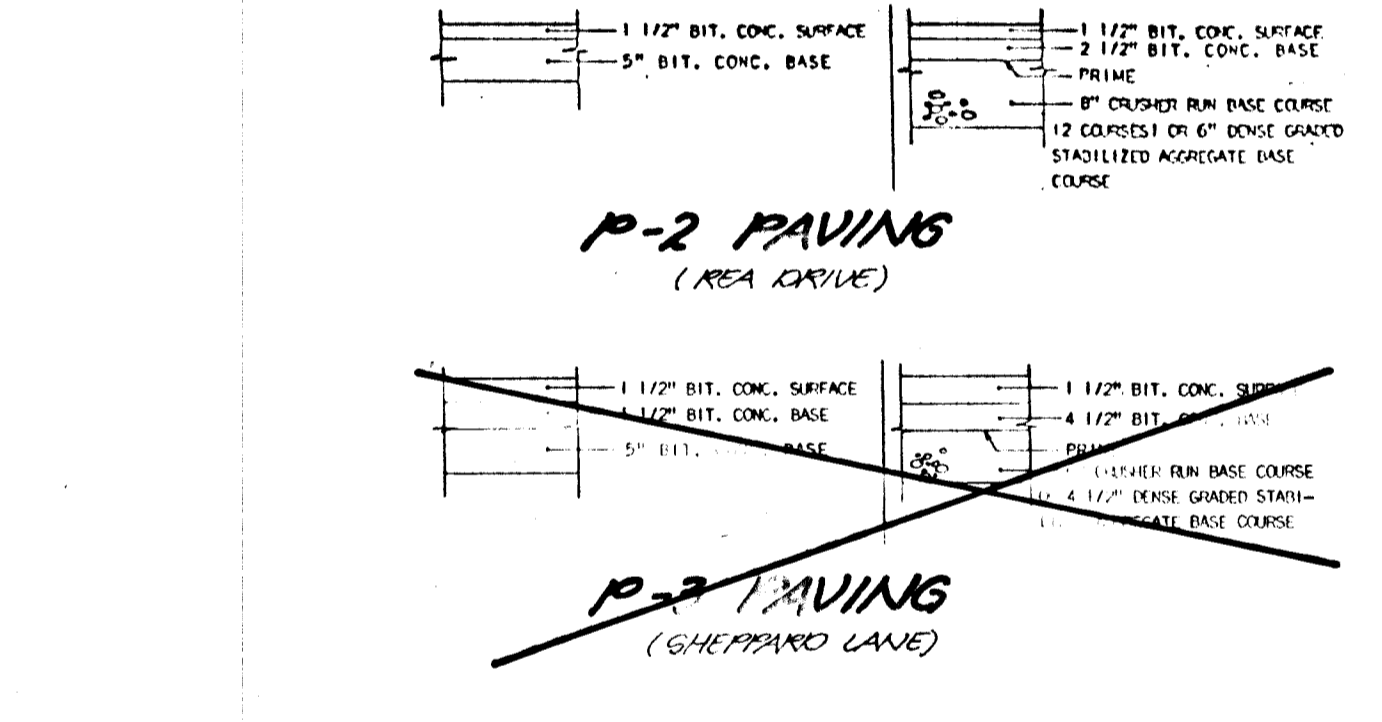
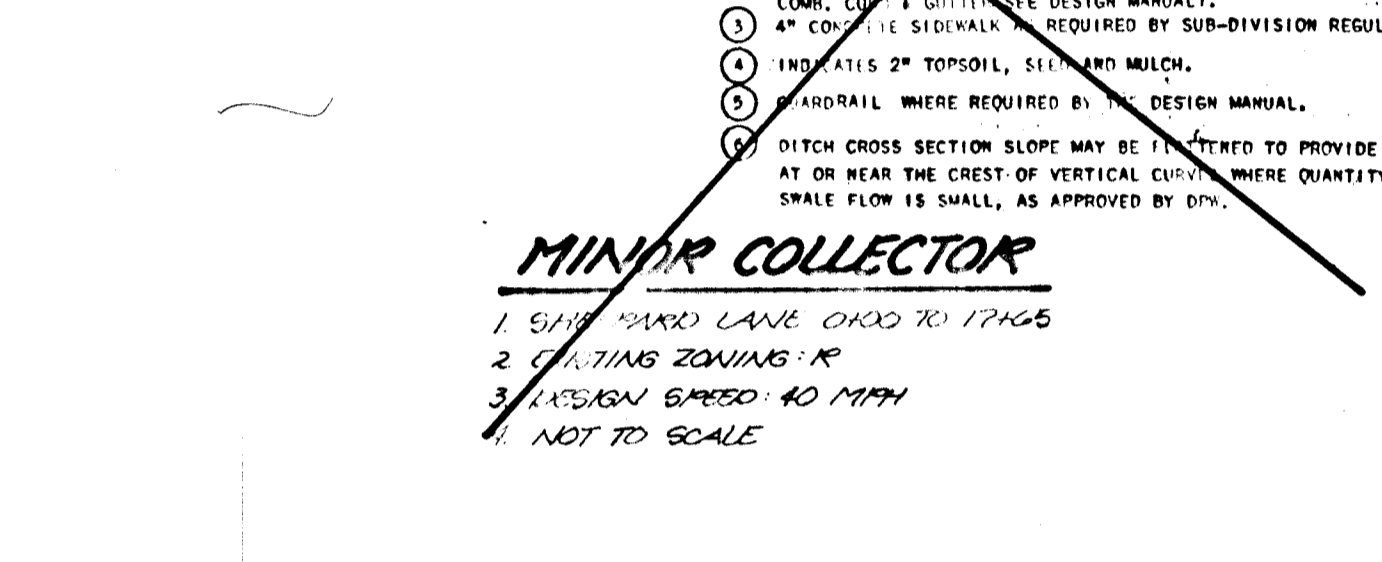
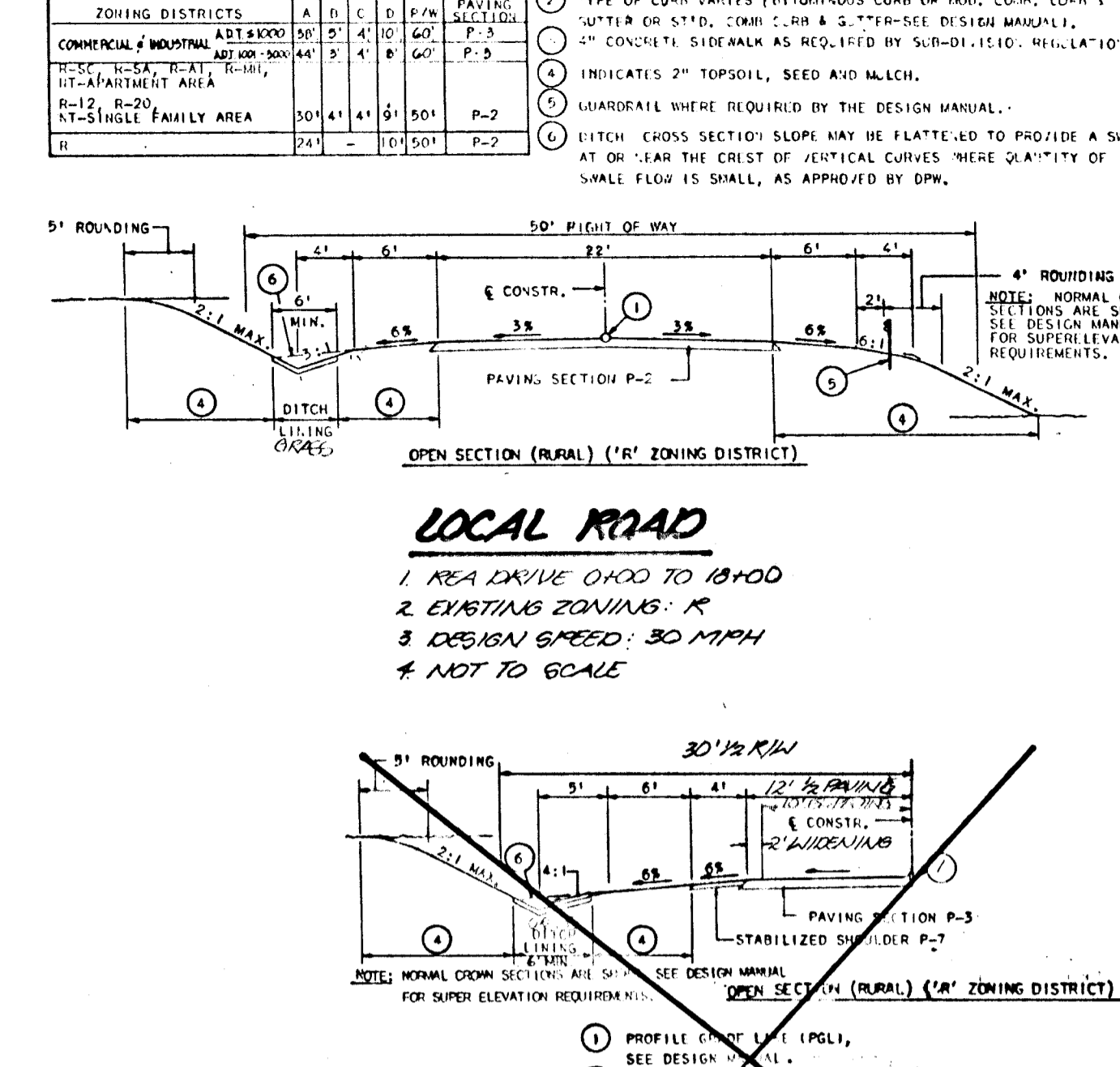
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Ch. M. Ryan 2/19/91

Ch. M. Ryan
Chief, and Deputy Supervisor

Dr. William W. Walden 3/28/91
Dr. William W. Walden
Chief, Bureau of Inspection

Dr. William W. Walden 4-4-91
Dr. William W. Walden
Chief, Bureau of Inspection

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Paul J. DeAngelis 2/10/91
Paul J. DeAngelis
Chief, Division of Community Planning and Land Development



- CONSTRUCTION SEQUENCE**
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 5. PROVIDE EASEMENTS AS REQUIRED FOR PLACEMENT OF BARRICADE AND ANY NECESSARY GUIDING (SEE DETAIL R5-06)

OWNER/DEVELOPER:
MULLEN REALTY
248101-01-0101
ROUTE 1, BOX 186
EASTON, MARYLAND 21601

DETAILS
PROJECT: SHEPPARD HILLS
LOCATION: 3 TH ELECTION DISTRICT HOWARD CO. MD
SCALE: AS SHOWN
DESIGNED BY: JCO
DRAWN BY: C.E.B.
CHECKED BY: JCO
DATE: NOV 1998
FIELD BOOK: PAGE NO: JOB NO: 28311

boender associates, inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3655 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD 21043
(301) 465-7177

16291