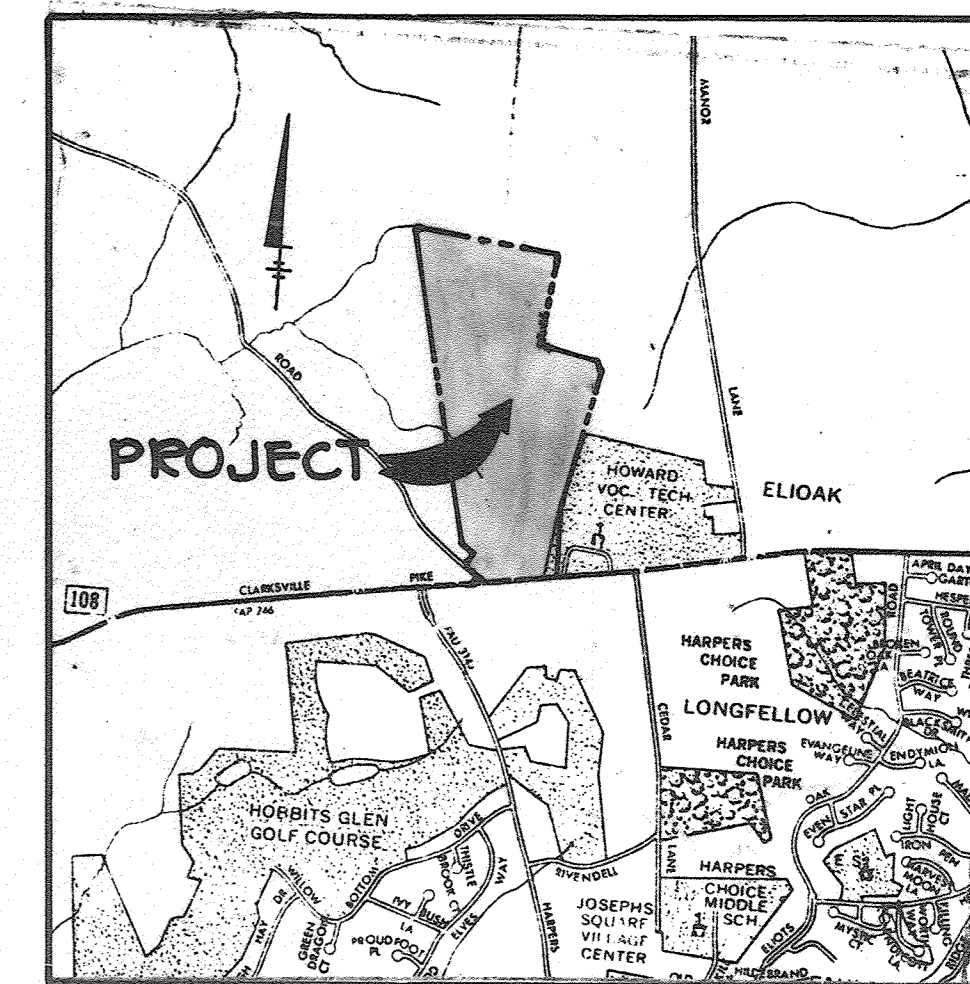


**SHEET INDEX**

No	DESCRIPTION
1	TITLE SHEET
2	PLANS AND PROFILES - GAITHER FARM ROAD & MD RT. #108
3	PLANS AND PROFILES - GAITHER FARM ROAD
4	PLANS AND PROFILES - GAITHER FARM ROAD
5	PLANS AND PROFILES - GAITHER FARM ROAD & DORSCH FARM RD
6	PROFILES AND DETAILS
7	GRADING AND SEDIMENT CONTROL
8	GRADING AND SEDIMENT CONTROL
9	DRAINAGE AREA A MAP
10	DRAINAGE AREA MAP
11	FOREST PLAN LOT 15
12	SITE AND GRADING PLAN

AS BUILT OF  
**ROADWAYS & STORM DRAINS**  
**GAITHER FARM**  
 ELECTION DISTRICT NO. 3  
 HOWARD COUNTY, MARYLAND



**VICINITY MAP**  
SCALE: 1" = 2000'

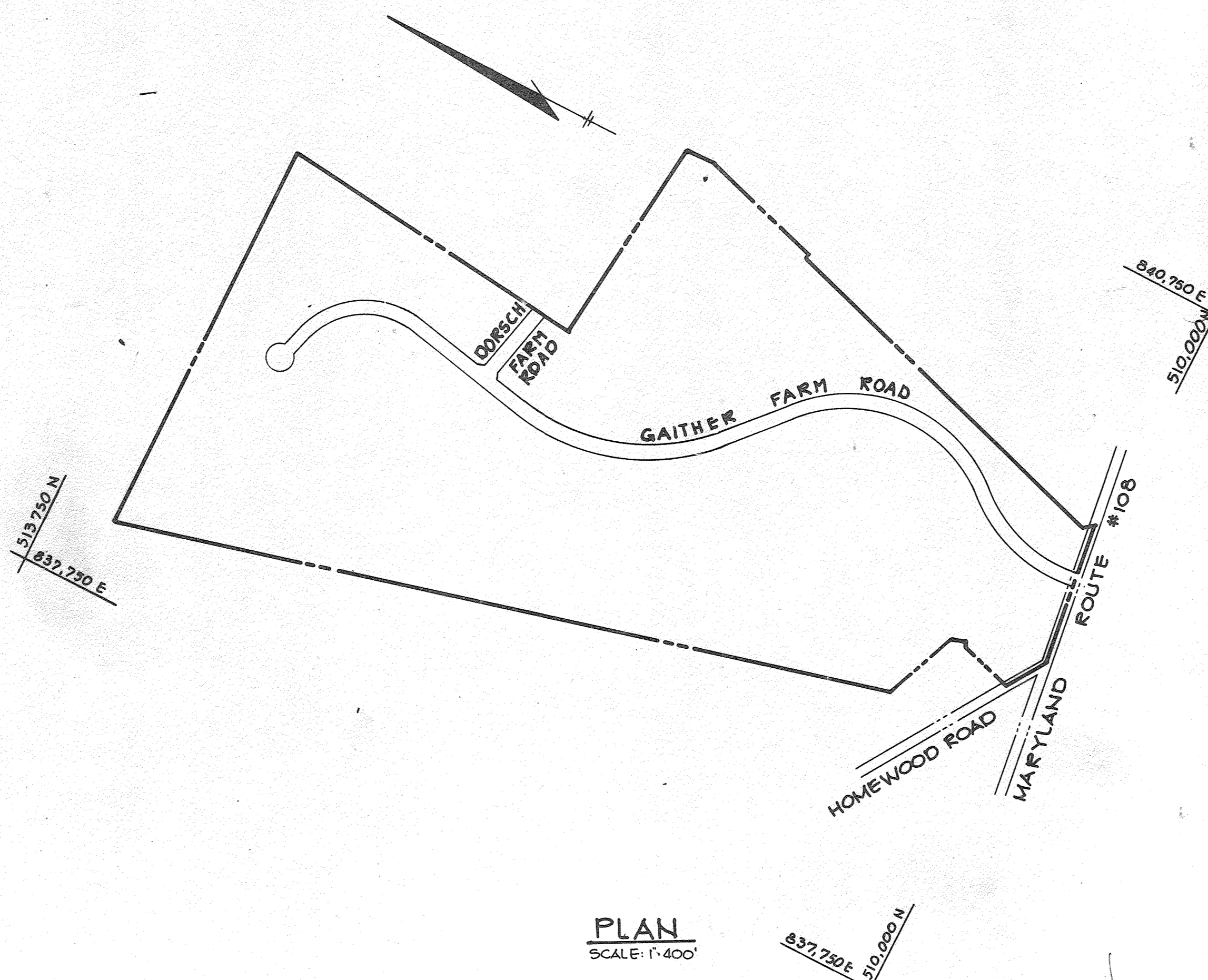
**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.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 EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 

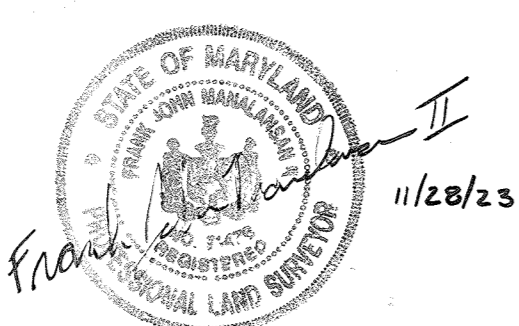
MISS UTILITY	559-0100
BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 or 3554
BALTIMORE GAS AND ELECTRIC COMPANY	539-8000, ext. 691
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 35.0' RADII UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.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 1971 EDITION.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:
 

ALL 50' RIGHT-OF-WAYS	30 M.P.H.
-----------------------	-----------
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 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-SA PER 10-03-77 COMPREHENSIVE ZONING PLAN.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED AUGUST, 1985 BY THE RIEMER GROUP, INC.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME I OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE OFFICE OF PLANNING AND ZONING FILE NO'S 9-85-45 AND P-86-10.
- UTILITY POLE RELOCATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY LINE.
- CULVERT WILL BE CONSTRUCTED UNDER EACH DRIVEWAY FOR EACH LOT TABULATED BELOW AT THE TIME OF BUILDING CONSTRUCTION.

LOT #	CULVERT SIZE	TYPE
19	12"	RCCP
20	15"	RCCP
21	12"	RCCP
24	12"	RCCP
25	12"	RCCP
1	15"	RCCP



**PLAN**  
SCALE: 1" = 400'



FOR REVISION #2 ONLY

**BENCH MARKS**  
 Ho. Co. BM 283904 ELEV. 478.67  
 CONCRETE MONUMENT @ SURFACE 106' ± NORTH OF  
 & ROUTE #108 AND 50' ± OF & EXIT FROM HOWARD  
 VOCATIONAL TECHNICAL CENTER.  
 Ho. Co. BM 2839005 ELEV. 466.84  
 CONCRETE MONUMENT 0.2' BELOW SURFACE 8' ± SOUTH  
 OF EDGE OF ROUTE #108 AND 150' ± EAST OF & OF ROAD  
 TO HARPERS CHOICE, COLUMBIA.

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John W. ...* 12-17-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*...* 12-17-85  
 CHIEF, BUREAU OF ENGINEERING

OWNER: PATRICK MCCUAN & WIFE  
 11500 PARADE ROAD  
 ELLICOTT CITY, MARYLAND 21043  
 DEVELOPER: MCCUAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

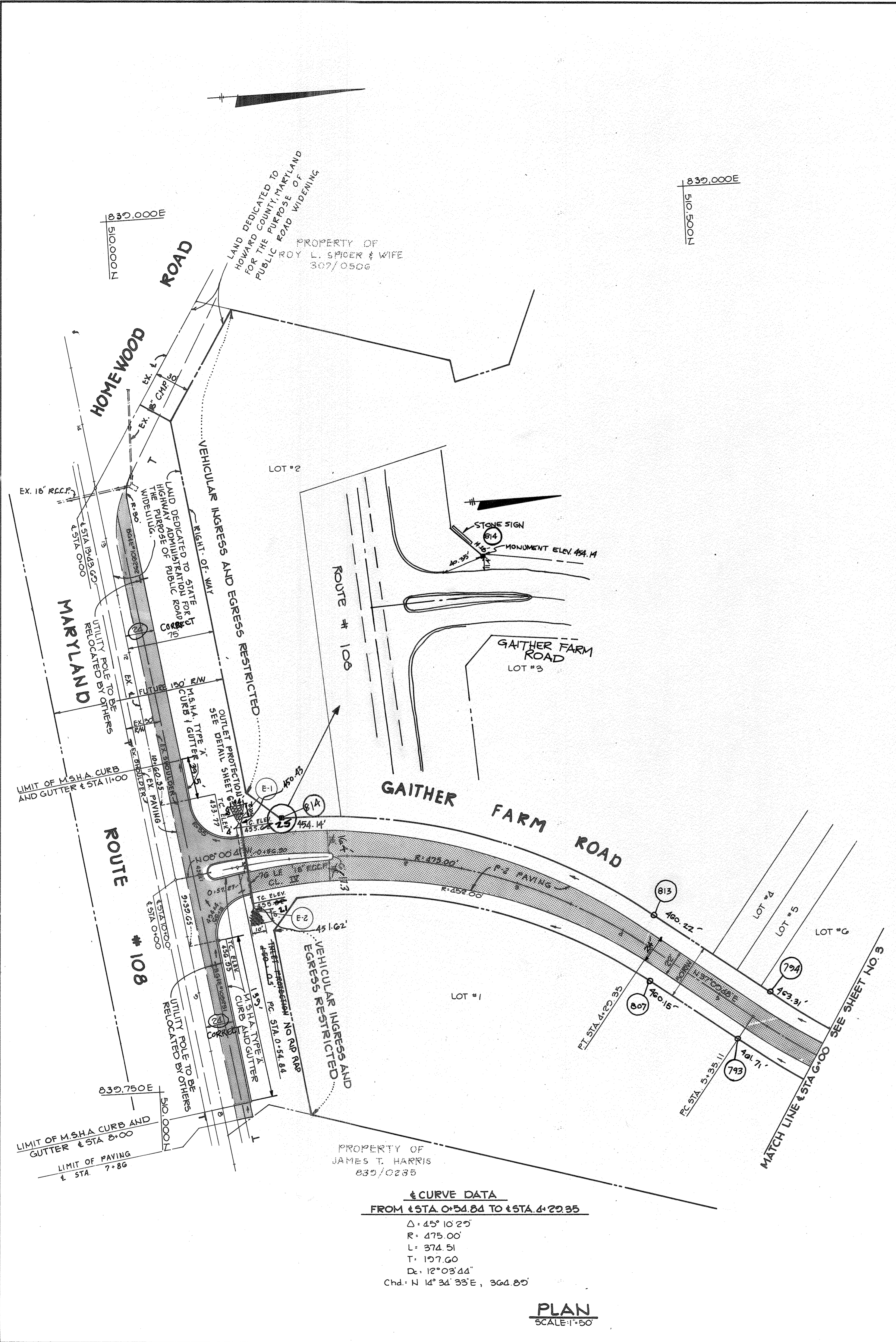
PROJECT: **GAITHER FARM**  
 AREA TAX MAP NO. 20 PARCEL 1  
 3<sup>RD</sup> ELECTION DISTRICT-HOWARD COUNTY, MARYLAND  
 ZONED "R"  
 TITLE: **TITLE SHEET**

**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2880

DATE	DESIGNED BY: JDP
	DRAWN BY: JCS
	PROJECT NO: 16300
	DATE: OCT. 7, 1985
	SCALE: AS SHOWN
	DRAWING NO. 1 OF 12

NO.	REVISION	DATE
2	REVISE SHEET INDEX TO ADD SHEET 12	11/20/23
1	REVISE SHEET INDEX TO REFLECT APPROVED SHEET, REV. SHEET NO. 7/10/20	7/10/20

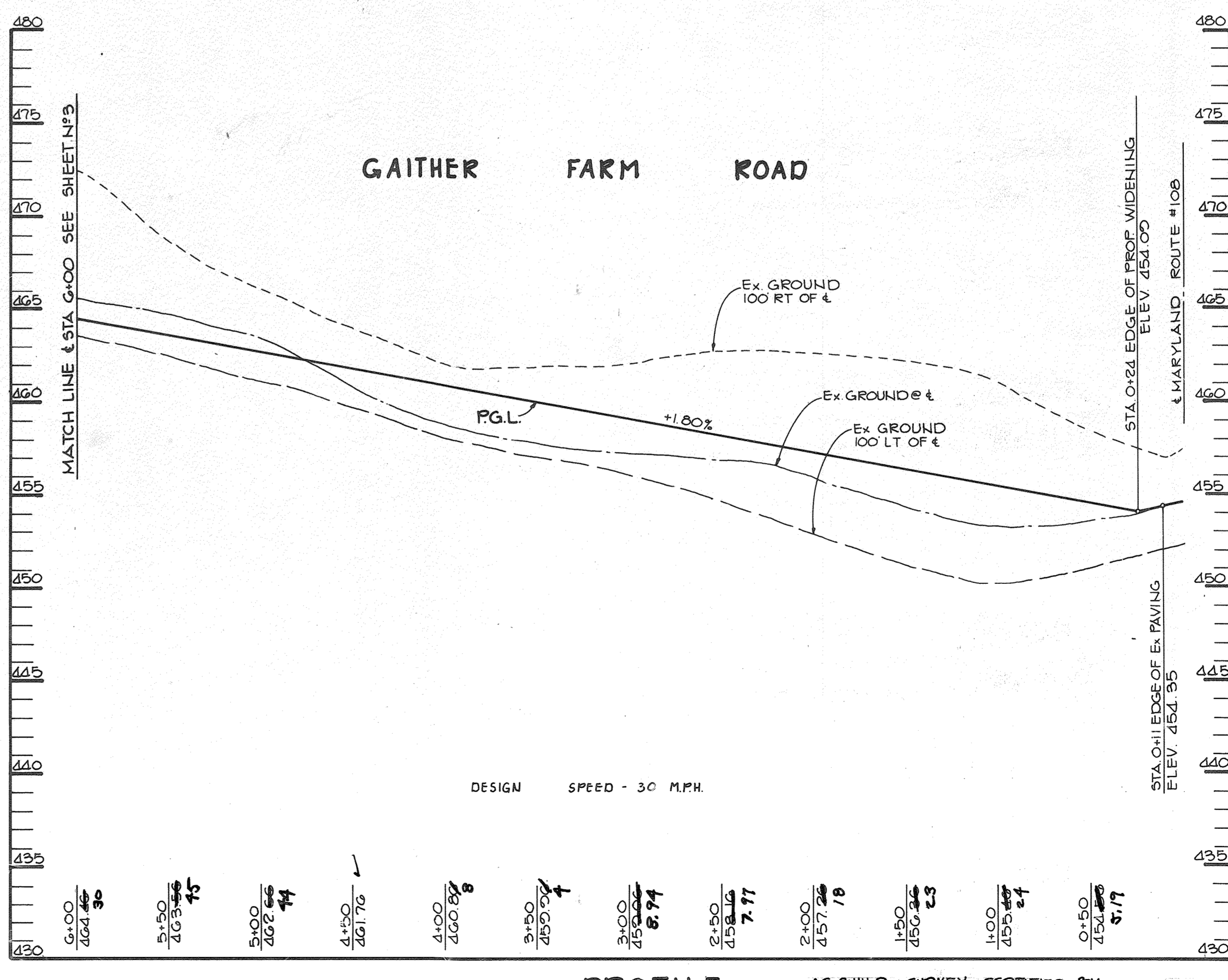




**CURVE DATA**  
 FROM STATION 0+24.84 TO STATION 4+29.35

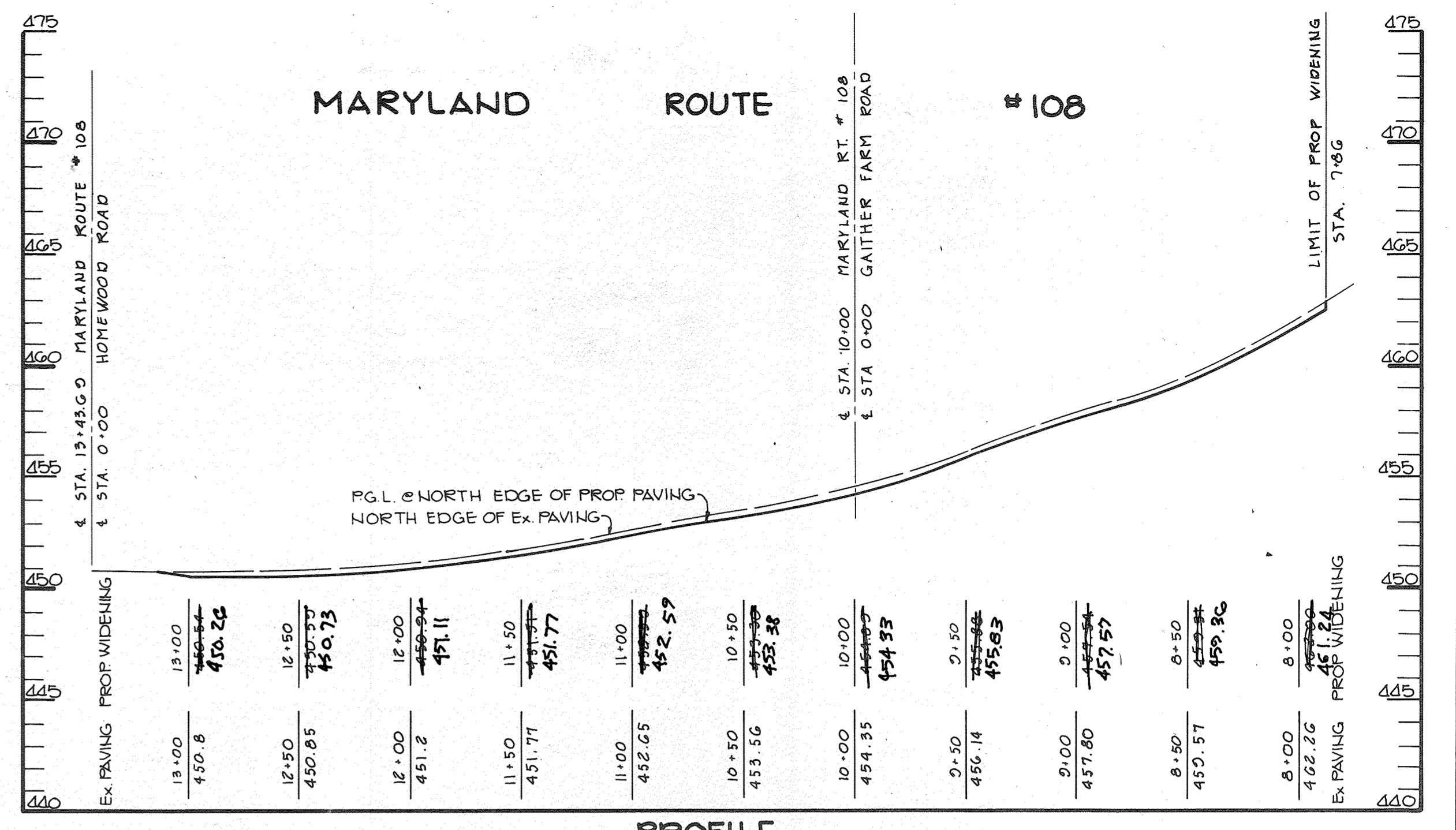
Δ	45° 10' 25"
R	475.00'
L	374.51'
T	137.60'
D	12° 03' 44"
Chd.	N 14° 34' 33" E, 364.80'

**PLAN**  
SCALE: 1" = 50'



**PROFILE**  
SCALE: HORIZ. 1" = 50' VERT. 1" = 5'

AS-BUILT SURVEY CERTIFIED BY  
 ARTHUR E. MUEGGE P.E. No. 8707 ON AUG. 26, 1986



**PROFILE**  
SCALE: HORIZ. 1" = 50' VERT. 1" = 5'

Arthur E. Muegge  
 ARTHUR E. MUEGGE #8707 DATE: 8-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John M. ...* 12-19-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*...* 12-22-85  
 CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION
------	-----	----------

OWNER: PATRICK M'CULAN & WIFE  
 11838 FARSIDE ROAD  
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER: M'CULAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: **GAITHER FARM**

AREA: TAX MAP # 20 PARCEL 1  
 3RD ELECTION DISTRICT  
 ZONED "K" HOWARD COUNTY, MARYLAND

TITLE: **PLAN AND PROFILE - GAITHER FARM ROAD & MARYLAND ROUTE #108**

**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2880

DATE: \_\_\_\_\_

DESIGNED BY: D.A.M.  
 DRAWN BY: B.A.C.  
 PROJECT NO: 10300  
 DATE: OCT. 7, 1985  
 SCALE: AS SHOWN  
 DRAWING NO. 2 OF 12

2/8/88

AS-BUILT

F-86-61

#1165

MARYLAND BLUEPRINT CO., INC. 13889



**± CURVE DATA**  
 FROM ± STA. 17+26.91 TO ± STA. 25+65.94  
 $\Delta = 60^{\circ}05'28''$   
 $R = 800.00'$   
 $L = 839.05'$   
 $T = 462.73'$   
 $D_c = 07^{\circ}09'43''$   
 $Chd = N18^{\circ}27'48''W, 801.11'$

MATCH LINE ± STA. 18+50 SEE SHEET NO. 4

$511,500 \text{ N}$   
 $833,250 \text{ E}$

GAITHER FARM ROAD

LOT # 23

LOT # 24

LOT # 7

LOT # 6

MATCH LINE ± STA. 12+50 SEE THIS SHEET

PLAN  
SCALE: 1"=50'

DRAINAGE EASEMENT CONTINUOUS TO ADJACENT PROPERTY, SEE RECORD PLAT

**± CURVE DATA**  
 FROM ± STA. 5+35.11 TO ± STA. 14+32.25  
 $\Delta = 65^{\circ}40'15''$   
 $R = 600.00'$   
 $L = 897.15'$   
 $T = 556.30'$   
 $D_c = 00^{\circ}32'57''$   
 $Chd = N05^{\circ}40'15''W, 815.88'$

MATCH LINE ± STA. 12+50 SEE THIS SHEET  
 12 LF 18" RCCP CL. II  
 200 LF 24" RCCP CL. II S  
 511,000 N  
 839,250 E

GAITHER FARM ROAD

MATCH LINE ± STA. 6+00 SEE SHEET NO. 2  
 $510,500 \text{ N}$   
 $840,000 \text{ E}$

GAITHER FARM ROAD

600' V.C.

PVI STA. 12+24  
 PVI ELEV. 447.71  
 CORR. + 8.10'  
 HSD = 200'

PVI STA. 11+00.27  
 PVI ELEV. 455.71

PVI STA. 8+00  
 PVI ELEV. 468.06  
 CORR. - 1.05'  
 HSD = 200'

200' V.C.

DESIGN SPEED 30 M.P.H.

**PROFILE**  
 HORIZ: 1"=50'  
 VERT: 1"=5'

AS-BUILD SURVEY CERTIFIED BY  
 ARTHUR E. MUEGGE (28A-PE, NO. 8708)  
 ON AUG. 26, 1986

Arthur E. Muegge  
 ARTHUR E. MUEGGE #8707 DATE 8-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 Chief, Division of Land Development and Zoning Administration  
 12-19-85 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Engineering  
 12-22-85 DATE


DATE	NO.	REVISION

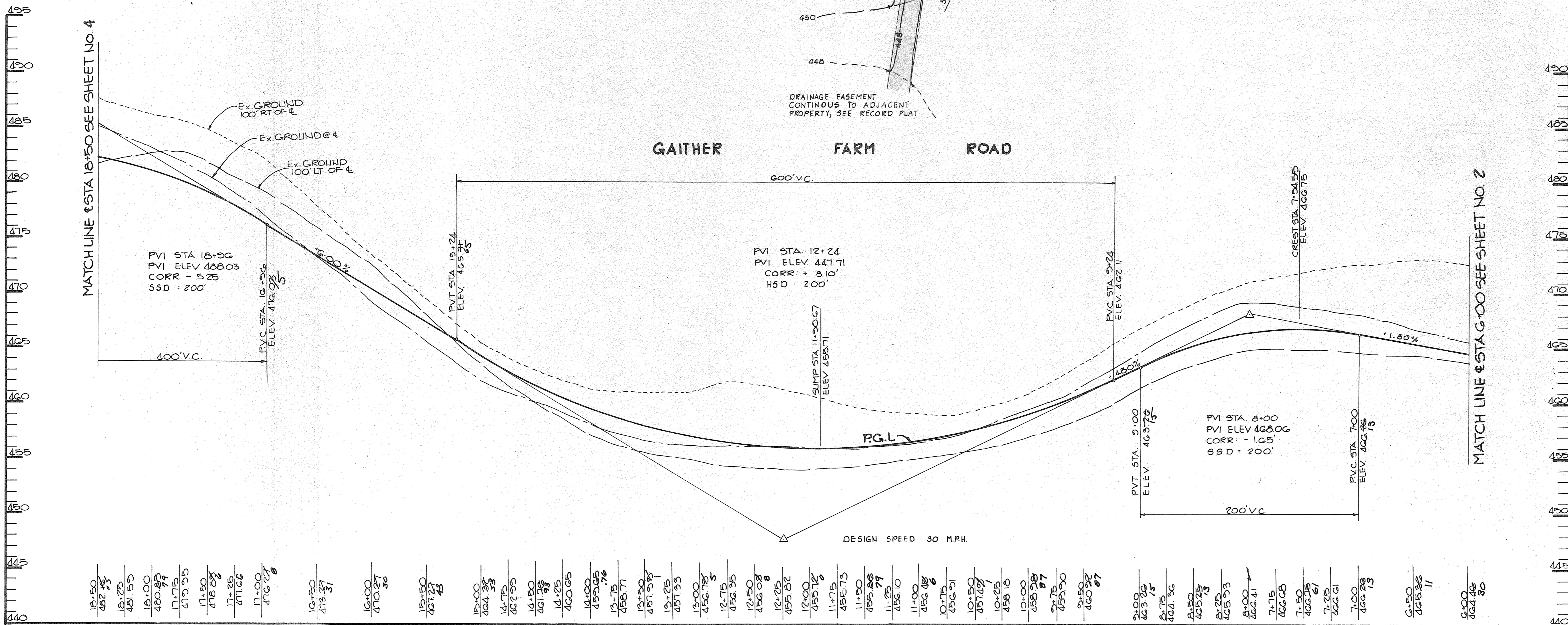
OWNER: PATRICK M'CUAN & WIFE  
 1838, FARSIDE ROAD  
 ELLICOTT CITY, MARYLAND 21043  
 DEVELOPER: M'CUAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: **GAITHER FARM**  
 AREA: TAX MAP NO. 20 PARCEL 1  
 3RD ELECTION DISTRICT  
 ZONED 'R' HOWARD COUNTY, MARYLAND

TITLE: **PLANS AND PROFILES  
 GAITHER FARM ROAD**

**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2680

DATE	DESIGNED BY: D.A.M.
	DRAWN BY: F.D.M.
	PROJECT NO: 18300
	DATE: OCT. 7, 1985
	SCALE: AS SHOWN
	DRAWING NO. 3 OF 12



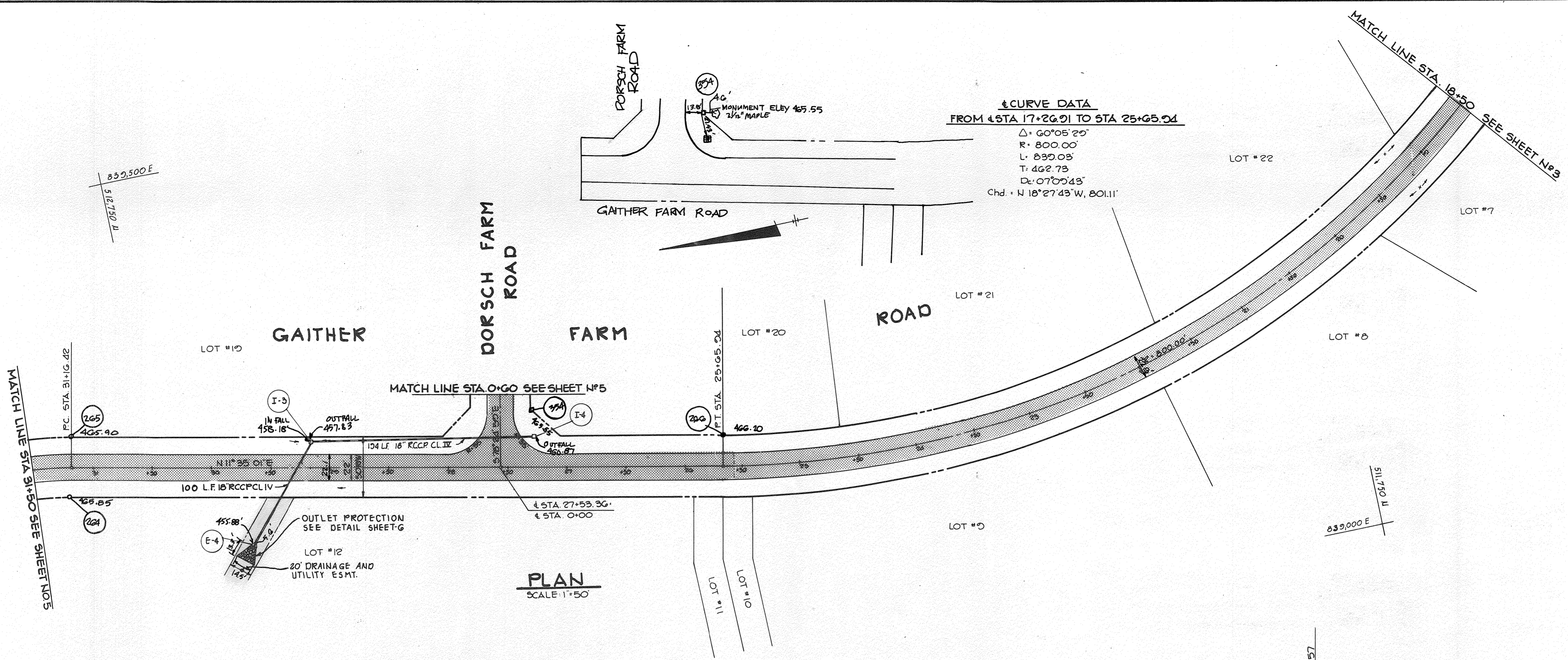
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18+55	482.15	19+05	484.35
18+60	482.15	19+10	484.35
18+65	482.15	19+15	484.35
18+70	482.15	19+20	484.35
18+75	482.15	19+25	484.35
18+80	482.15	19+30	484.35
18+85	482.15	19+35	484.35
18+90	482.15	19+40	484.35
18+95	482.15	19+45	484.35
19+00	482.15	19+50	484.35
19+05	482.15	19+55	484.35
19+10	482.15	19+60	484.35
19+15	482.15	19+65	484.35
19+20	482.15	19+70	484.35
19+25	482.15	19+75	484.35
19+30	482.15	19+80	484.35
19+35	482.15	19+85	484.35
19+40	482.15	19+90	484.35
19+45	482.15	19+95	484.35
19+50	482.15	20+00	484.35
19+55	482.15	20+05	484.35
19+60	482.15	20+10	484.35
19+65	482.15	20+15	484.35
19+70	482.15	20+20	484.35
19+75	482.15	20+25	484.35
19+80	482.15	20+30	484.35
19+85	482.15	20+35	484.35
19+90	482.15	20+40	484.35
19+95	482.15	20+45	484.35
20+00	482.15	20+50	484.35
20+05	482.15	20+55	484.35
20+10	482.15	20+60	484.35
20+15	482.15	20+65	484.35
20+20	482.15	20+70	484.35
20+25	482.15	20+75	484.35
20+30	482.15	20+80	484.35
20+35	482.15	20+85	484.35
20+40	482.15	20+90	484.35
20+45	482.15	20+95	484.35
20+50	482.15	21+00	484.35

2/8/88

AS-BUILT

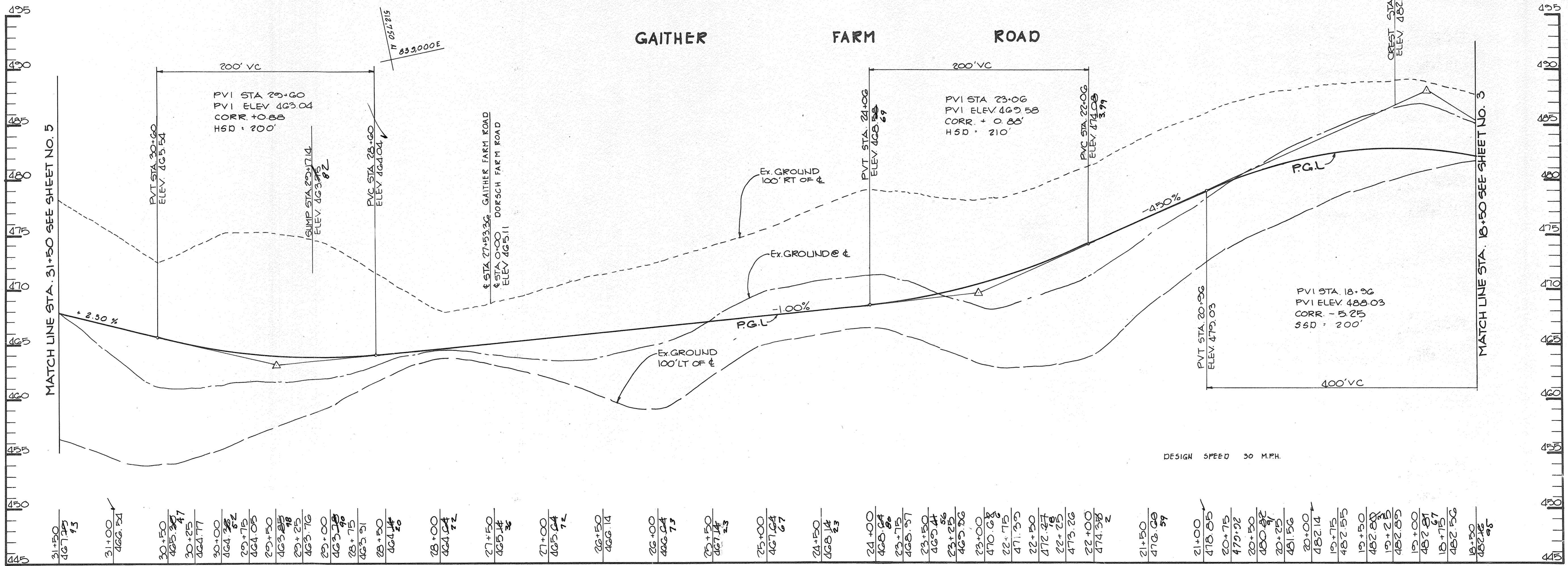
F-86-61





**± CURVE DATA**  
 FROM STA 17+26.91 TO STA 25+65.04  
 Δ: 60°05'20"  
 R: 800.00'  
 L: 830.03'  
 T: 462.73'  
 D: 07°00'43"  
 Chd.: N 18° 27' 43" W, 801.11'

**PLAN**  
 SCALE: 1"=50'



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

APPROVED: *Arthur E. Muegge* 8-26-86  
 ARTHUR E. MUEGGE 8707 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John Muegge* 12-19-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Arthur E. Muegge* 12-23-85  
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION
OWNER: PATRICK MCQUAN & WIFE 1638 FARMSIDE ROAD ELLCOTT CITY MARYLAND 21043		
DEVELOPER: MCGUAN DEVELOPMENT GROUP 1000 EQUITABLE BANK CENTER COLUMBIA MARYLAND 21044		
PROJECT: <b>GAITHER FARM</b>		
AREA	TAX MAP NO. 29	PARCEL 1
ZONED "R" 3RD ELECTION DISTRICT HOWARD COUNTY MARYLAND		

**TITLE: PLAN AND PROFILE  
 GAITHER FARM ROAD**

**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2890

DATE	DESIGNED BY: D.A.M.
	DRAWN BY: F.D.M.
	PROJECT NO: 18300
	DATE: OCT. 7, 1985
	SCALE: AS SHOWN
	DRAWING NO. 4 OF 12

2/8/88

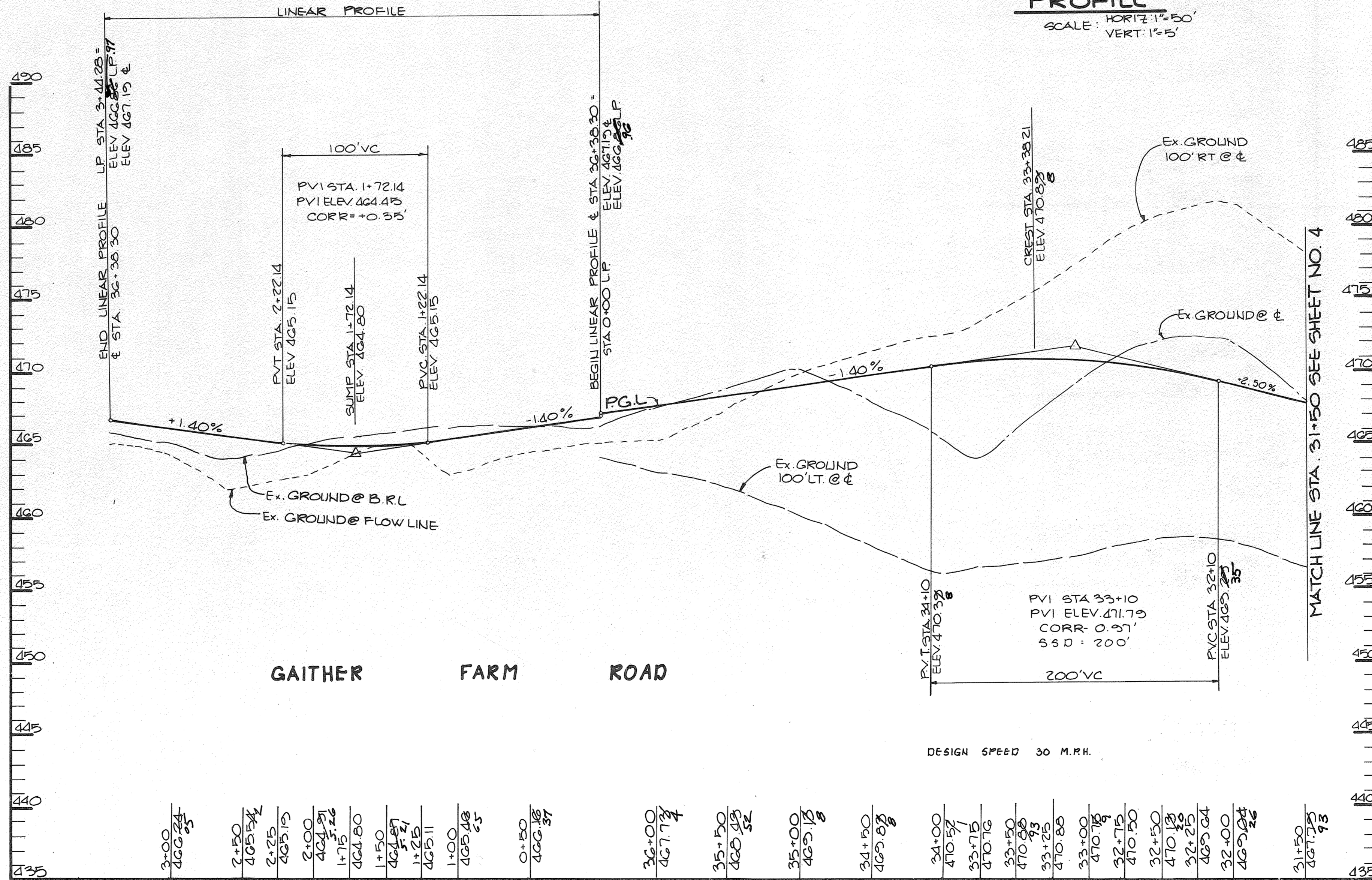
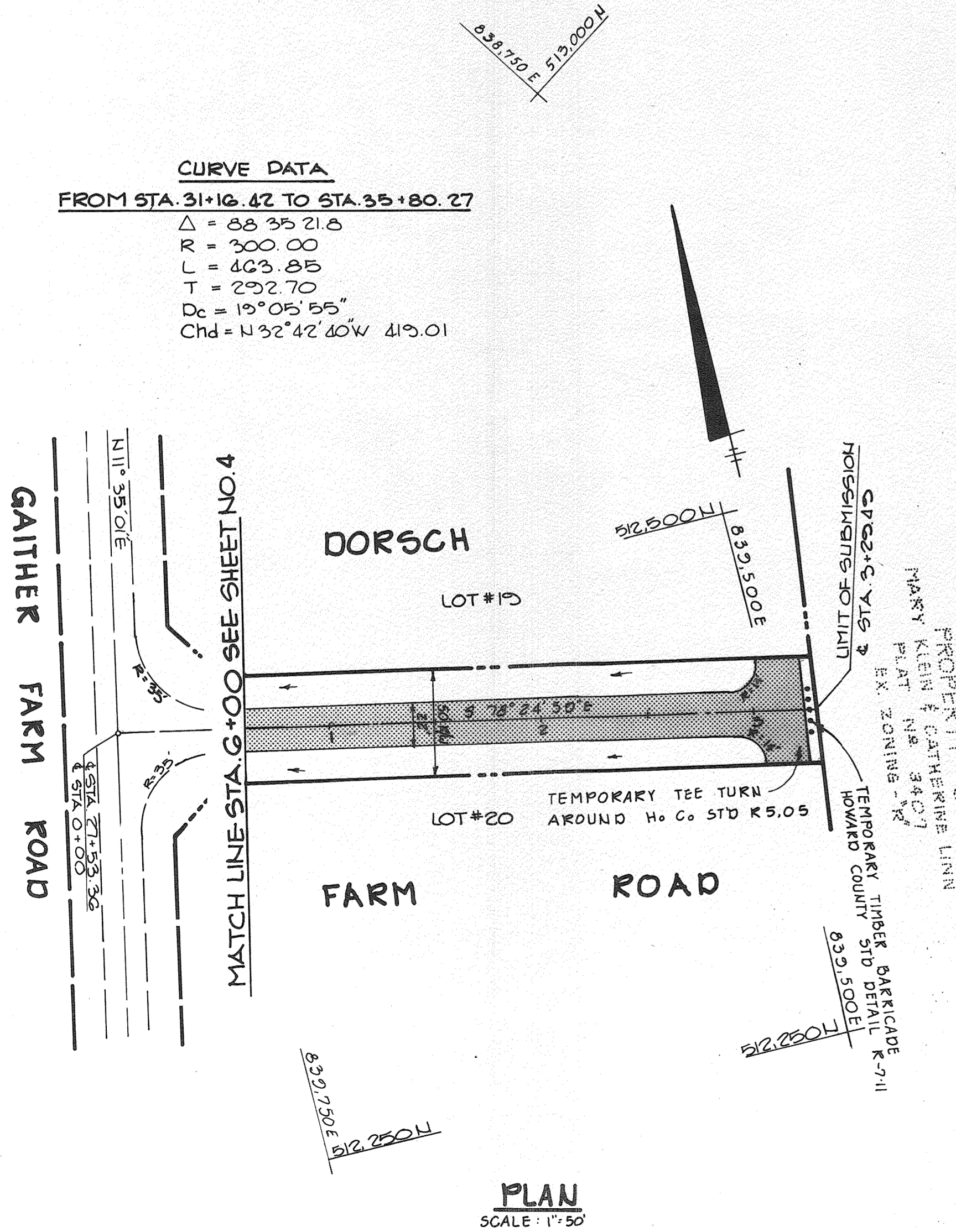
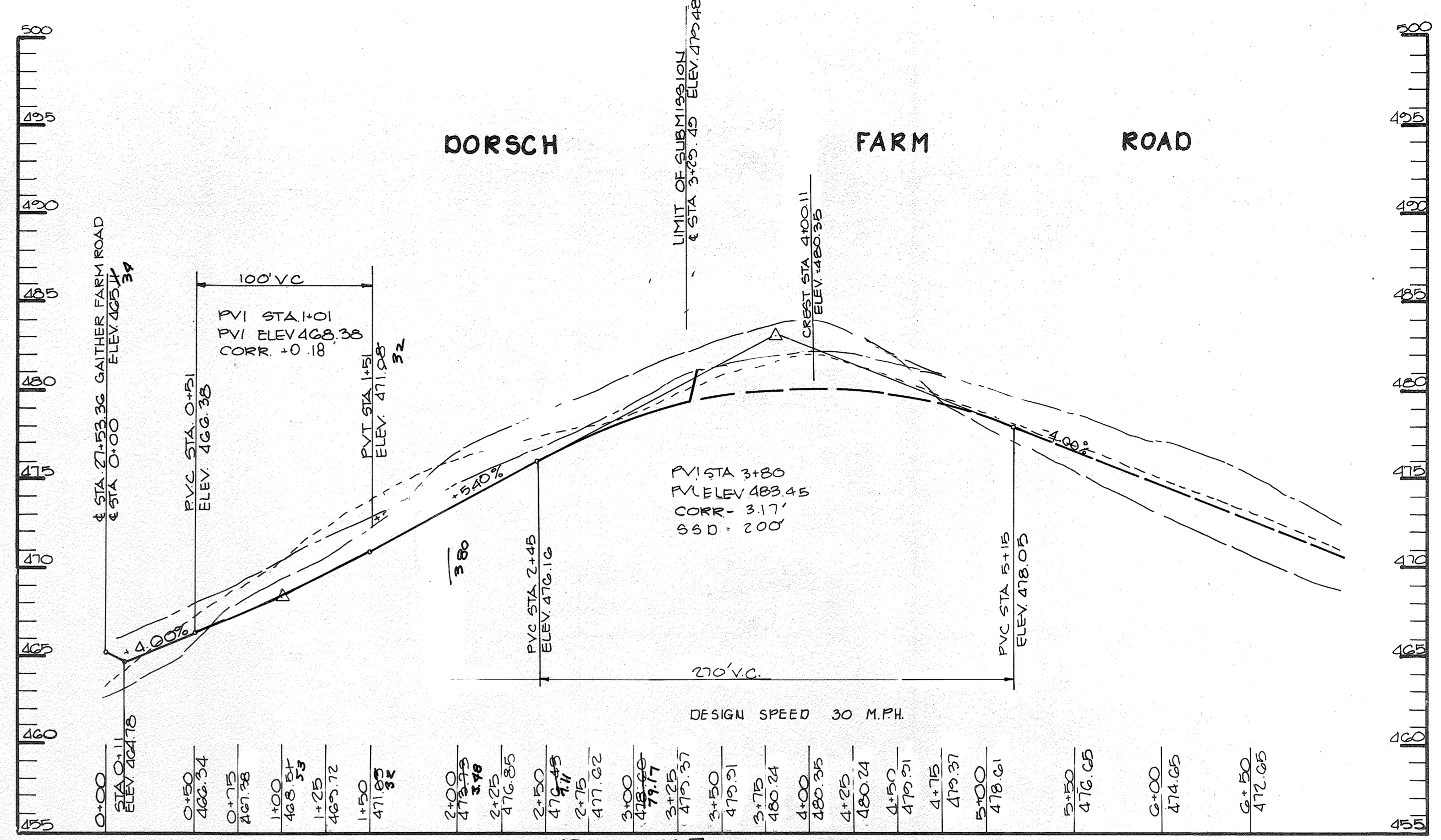
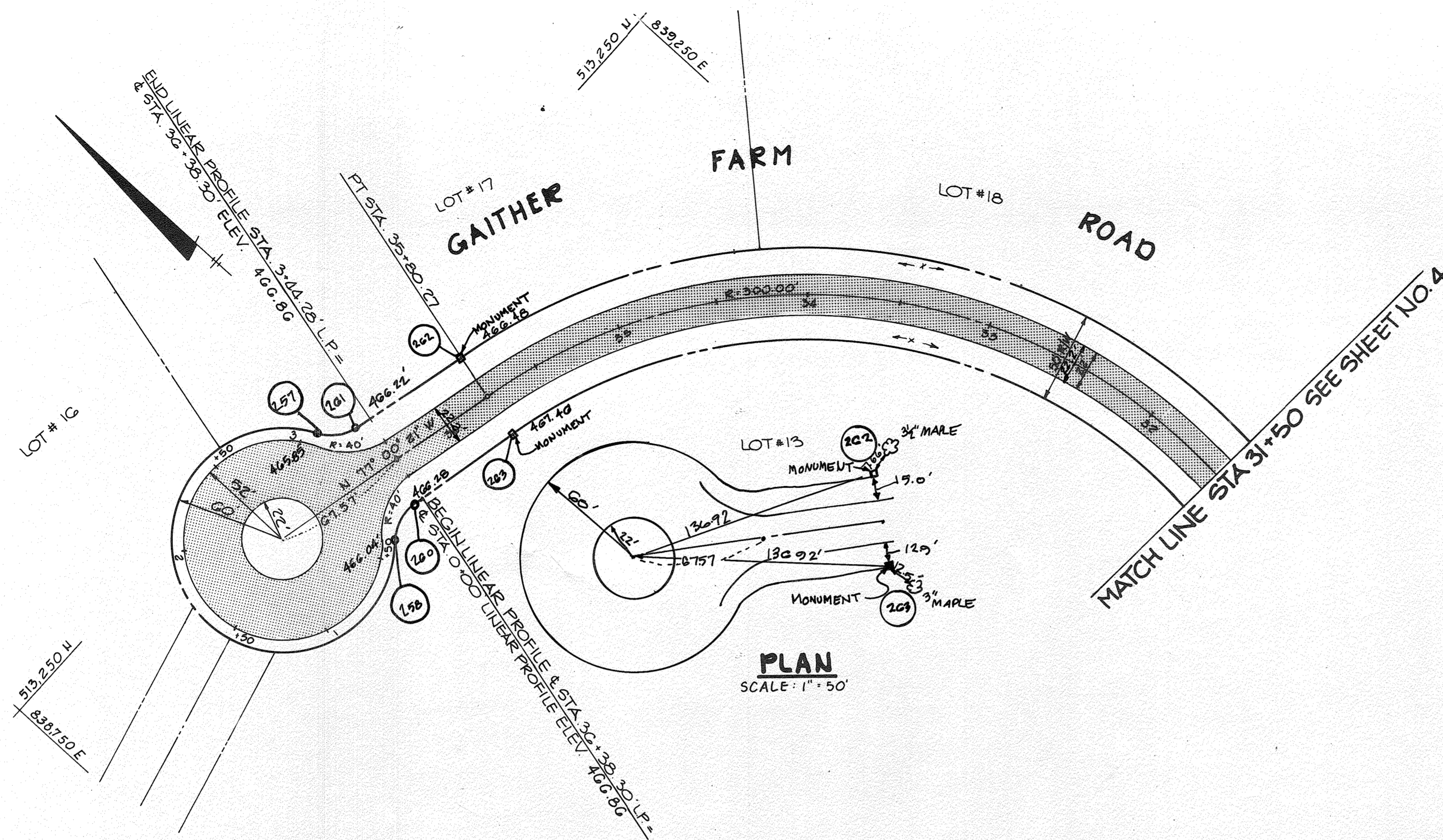
MS-BUILT

F-86-61

#1165

MARYLAND BLUEPRINT CO., INC. NAB93





APPROVED: *Arthur E. Muegge* 8-26-86  
 ARTHUR E. MUEGGE #8707 DATE

APPROVED: *John M. ...* 12-19-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: *...* 12-23-85  
 CHIEF, BUREAU OF ENGINEERING DATE

5/14/82 REVISOR DORSCH FARM ROAD AS PER COUNTY COMMENTS  
 DATE NO. REVISION

OWNER: PATRICK MCCUAN & WIFE  
 11838 FARMSIDE ROAD  
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER: MCCUAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: **GAITHER FARM**

AREA: TAX MAP # 29 PARCEL 1  
 3RD ELECTION DISTRICT  
 ZONED "R" HOWARD COUNTY, MARYLAND

TITLE: **PLAN AND PROFILE - GAITHER FARM ROAD & DORSCH FARM ROAD**

**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

DATE: 2/8/88  
 DESIGNED BY: D.A.M.  
 DRAWN BY: F.D.M.  
 PROJECT NO: 16300  
 DATE: OCT. 7, 1985  
 SCALE: AS SHOWN  
 DRAWING NO. 5 OF 12



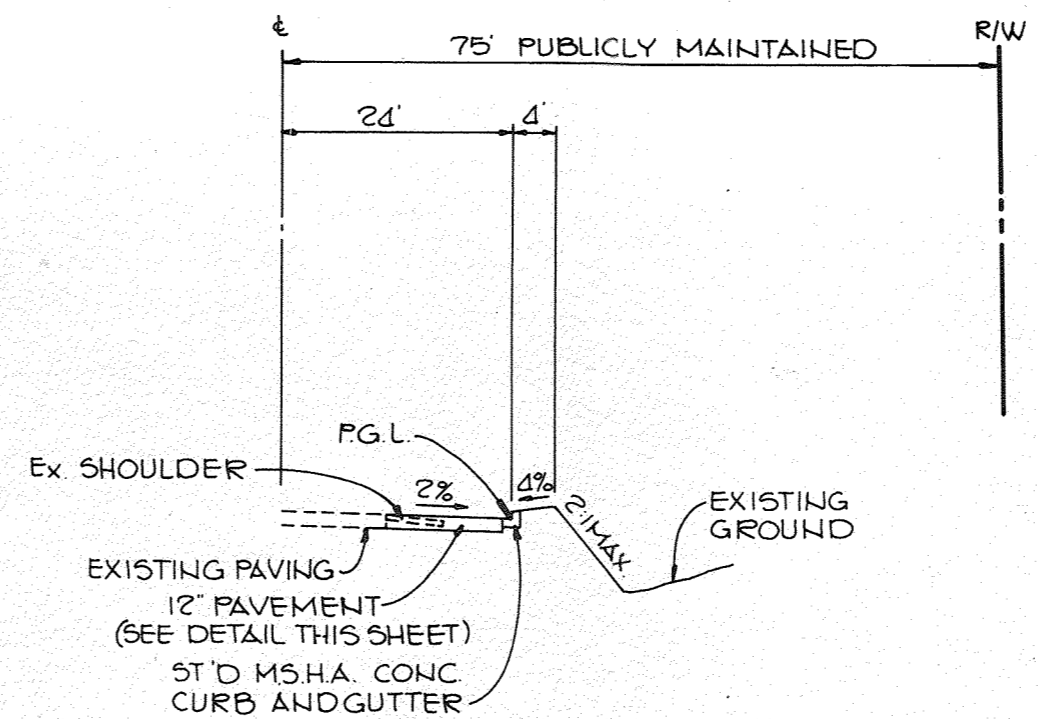
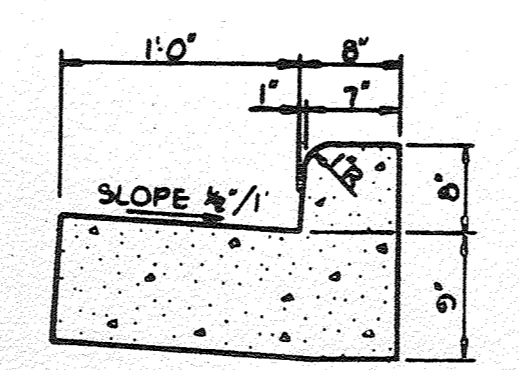
2/8/88

AS-BUILT

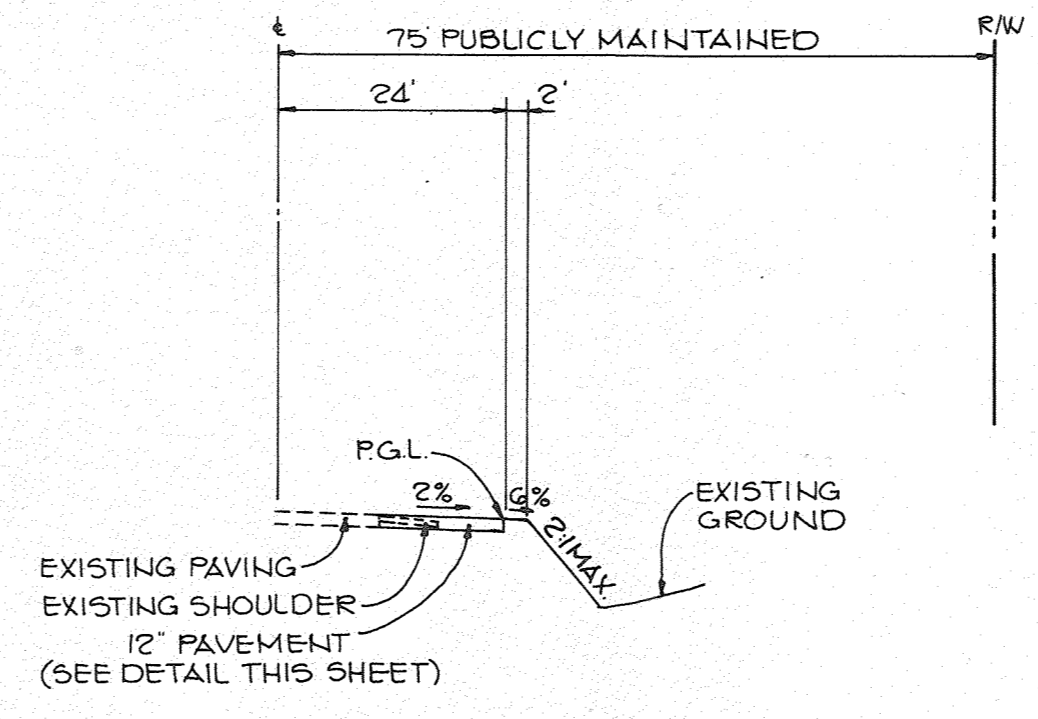
F-86-G1



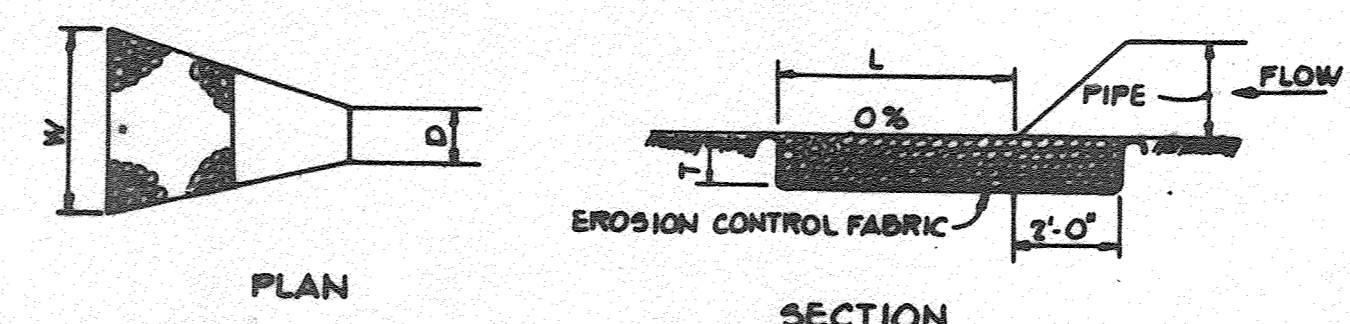
**M.S.H.A. TYPE 'A' CURB AND GUTTER**  
No Scale



MARYLAND ROUTE #108 FROM STA. 8+00 TO STA. 11+00

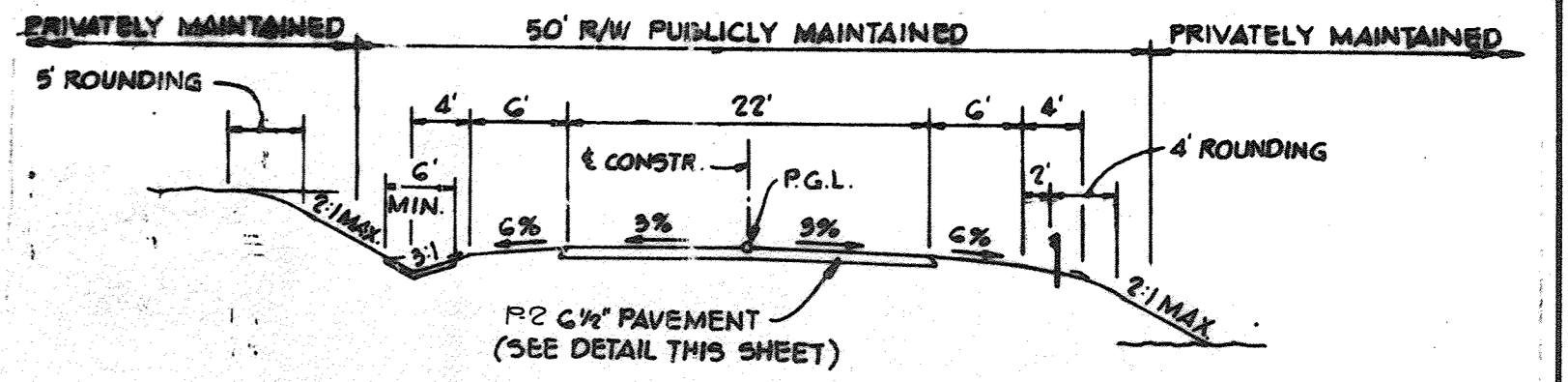


MARYLAND ROUTE #108 ROAD WIDENING  
NO SCALE

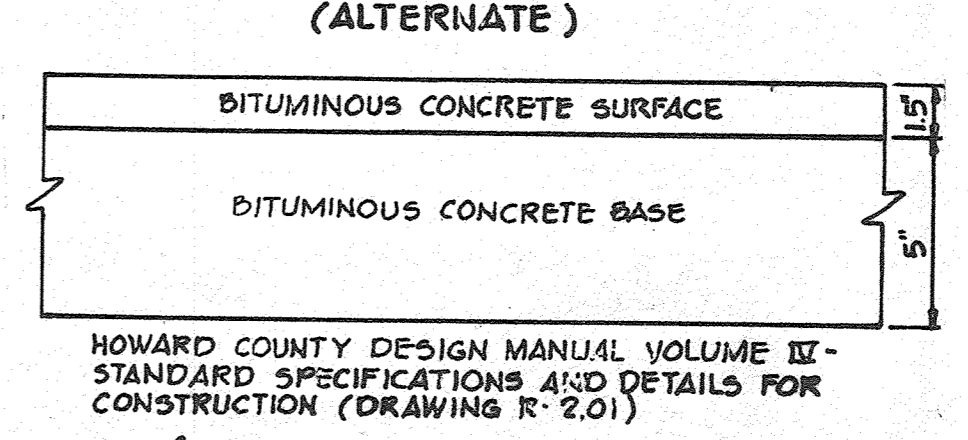
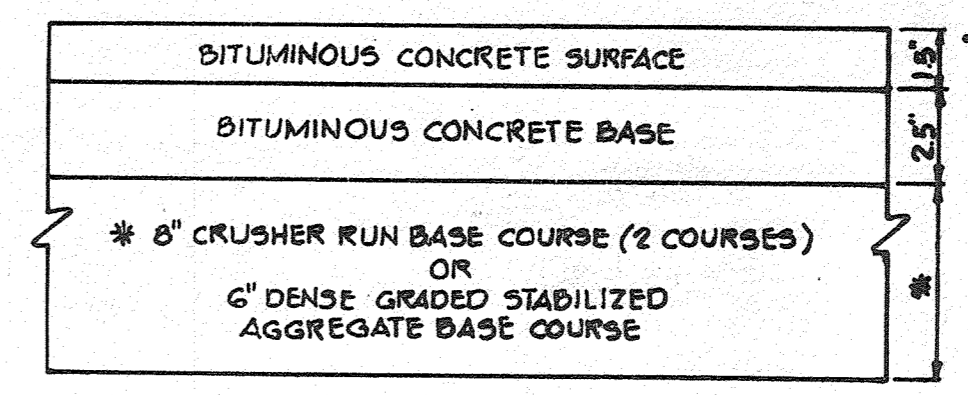


STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	.33'	10'	12'	.75'
E-3	.50'	16'	18'	1.17'
E-4	.50'	12'	14'	1.17'

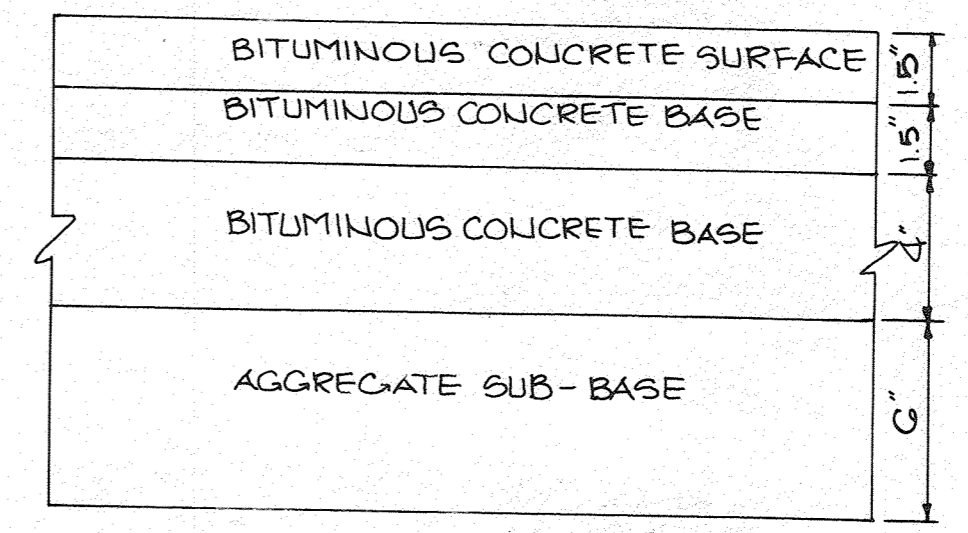
**OUTLET PROTECTION DETAIL**  
No Scale



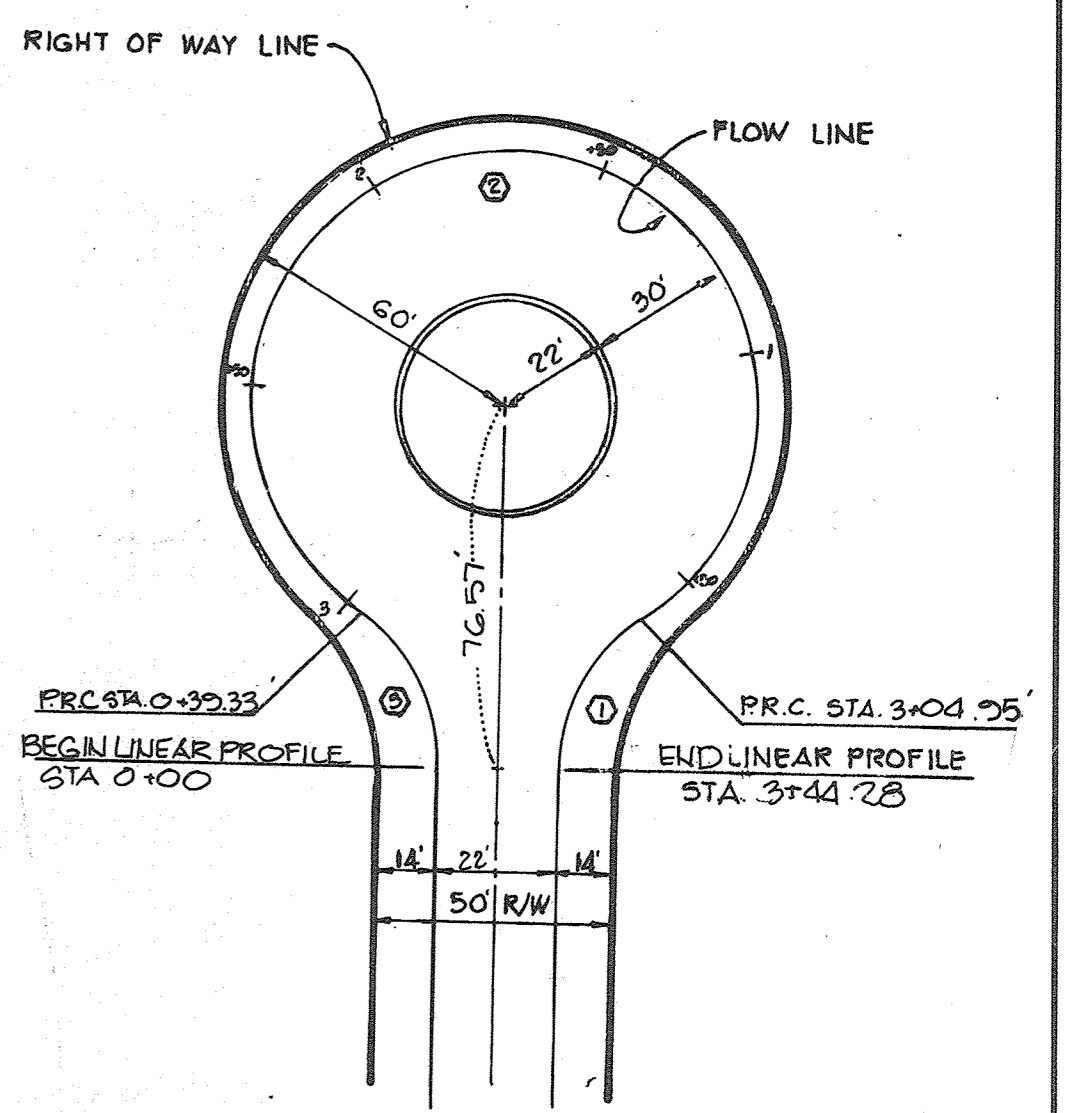
**TYP. SECTION 50' R/W**  
NO SCALE



**(6 1/2" PAVING, P-2)** STD SYMBOL  
GAITHER FARM ROAD FROM STA. 0+57 TO CUL-DE-SAC  
DORSCH FARM ROAD FROM STA. 0+00 TO STA. 3+29.40

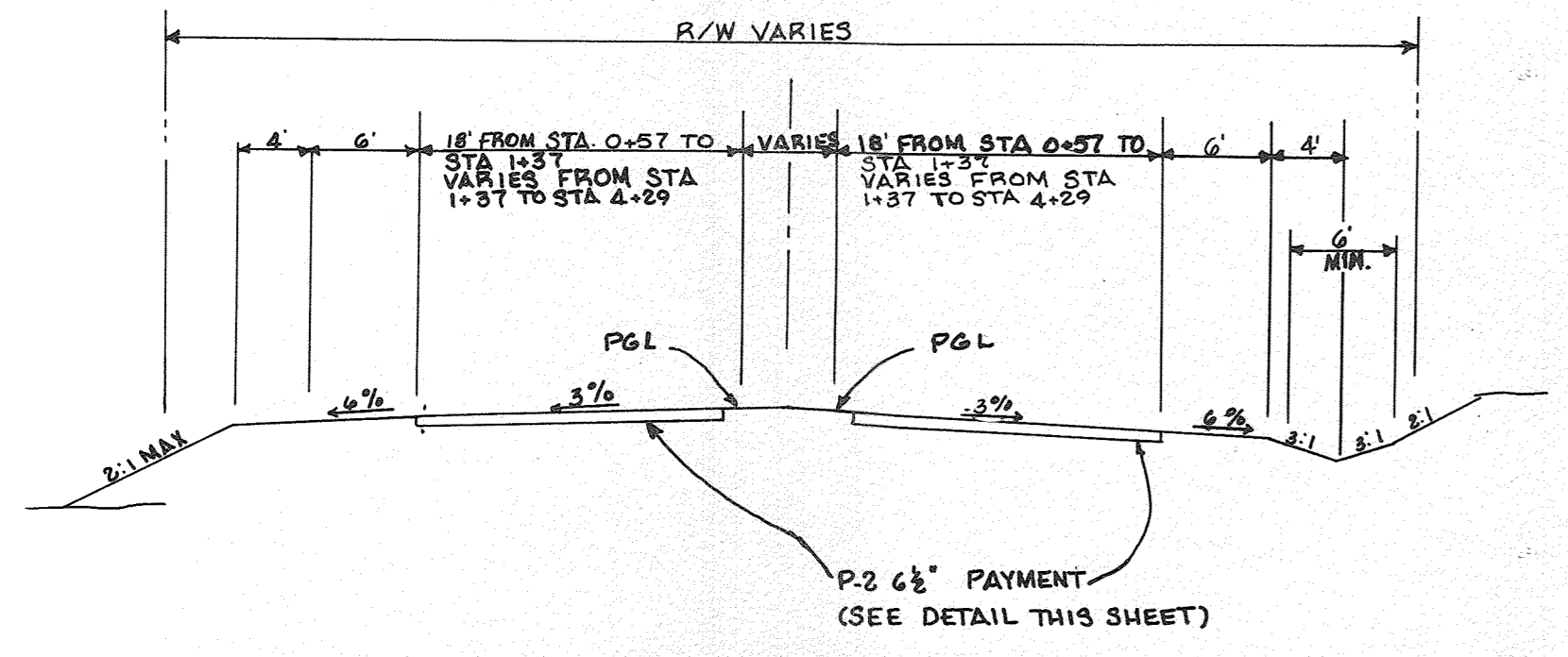


MARYLAND ROUTE #108 WIDENING STD SYMBOL  
GAITHER FARM ROAD FROM STA. 0+00 TO STA. 0+57  
**(12" PAVING, )**  
**TYPICAL PAVING SECTIONS**  
NO SCALE



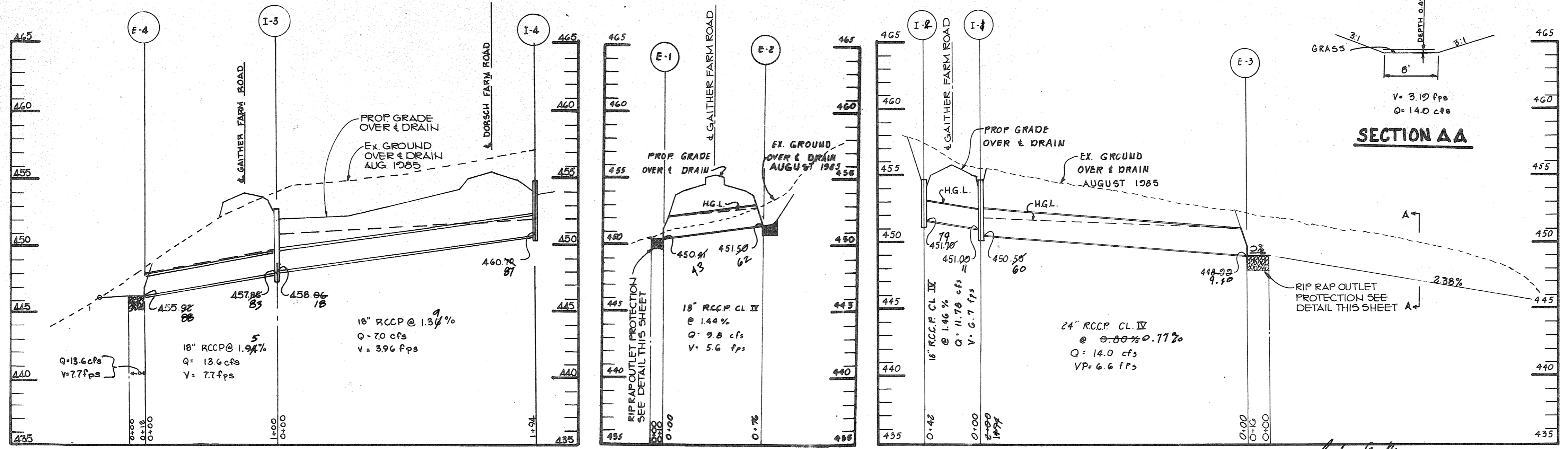
CURVE	RADIUS	LENGTH	Δ	TAN
①	40.00'	39.33'	50°20'03"	21.42'
②	52.00'	26.62'	29°24'00"	—
③	40.00'	39.33'	50°20'03"	21.42'

**CUL-DE-SAC DETAIL**  
NO SCALE

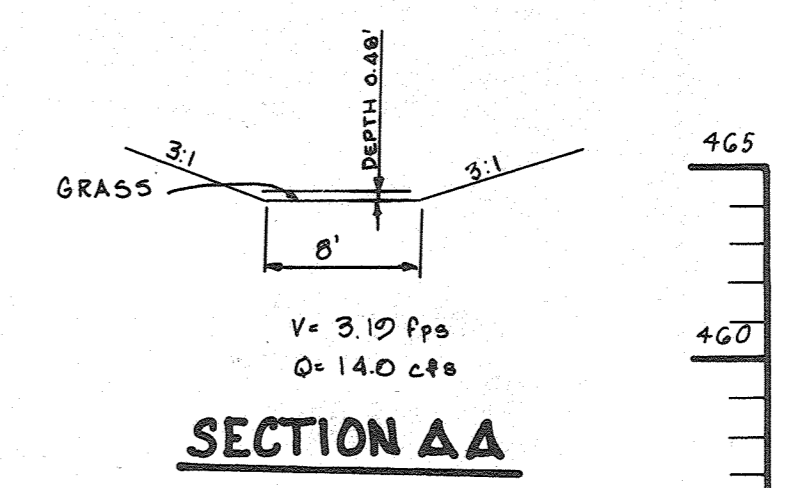


ZONED 'R' - LOCAL ROAD - DESIGN SPEED 30 MPH  
GAITHER FARM ROAD FROM STA. 0+57 TO STA. 4+29

**TYPICAL PAVING SECTION**  
NO SCALE



**PROFILES**  
SCALE: HORIZ. - 1"=50'  
VERT. - 1"=5'



**SECTION AA**

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
*John Muegge* 12-19-85  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
CHIEF, BUREAU OF ENGINEERING  
*Arthur E. Muegge* 12-20-85  
DATE

DATE	NO.	REVISION

OWNER: PATRICK MCGUIN & WIFE  
11838 FARSIDE ROAD  
ELLCOTT CITY, MARYLAND 21043

DEVELOPER: MCGUIN DEVELOPMENT GROUP  
1000 EQUITABLE BANK CENTER  
COLUMBIA, MARYLAND 21044

PROJECT: **GAITHER FARM**

AREA: TAX MAP NO. 23 PARCEL - 1  
3RD ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE: **DETAILS AND PROFILES**

**THE RIEMER GROUP, INC.**  
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

DESIGNED BY: D.A.M.  
DRAWN BY: B.A.C.  
PROJECT NO: 18300  
DATE: OCT 7, 1985  
SCALE: AS SHOWN  
DRAWING NO. 6 OF 12



**SEDIMENT CONTROL NOTES**

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (SP-2637).
- 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.
- 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, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
 

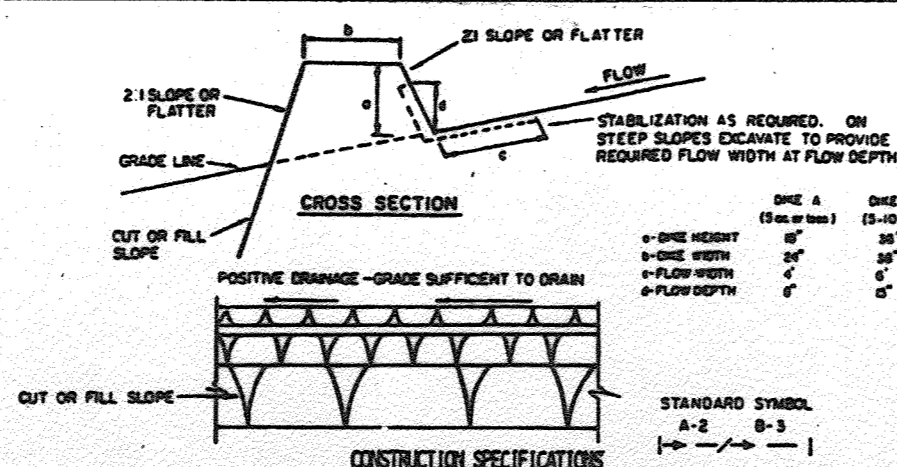
Total Area of Site	111.01 acres
Area Disturbed	2.00 acres
Area to be roofed or paved	2.22 acres
Area to be vegetatively stabilized	7.77 acres
Total Cut	715.0 Cu. Yds.
Total Fill	282.0 Cu. Yds.
TOTAL	997.0 Cu. Yds.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DPM sediment control inspector.
- Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
- Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.

**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.
- Soil Amendments:** Apply 0-20-20 fertilizer at the rate of 800 lbs. per acre; boron or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3". Lawns or high maintenance areas will be dragged and leveled with a York rake. At the time of seeding, apply 400 lbs. of 30-0-0 ureaform fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.
- Seeding:** For the periods March 1 thru April 30, and August 1 thru October 15, seed with 40 lbs. per acre (1 lb./1000 sq-ft.) of a mixture of certified 'Merion' Kentucky bluegrass; common Kentucky bluegrass @ 40 lbs. per acre (1 lb./1000 sq-ft.) and Red Fescue, Perennial or Jamestown @ 20 lbs. per acre (0.5 lb./1000 sq-ft.) for the period May 1 thru July 31, seed with 40-40-20 mix as specified above and 2 lbs. per acre (0.05 lb./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) the sod, (Option 3) Seed with 40-40-20 mix specified above 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 ft. 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 upper three inches of soil by raking, discing or other acceptable means before seeding.
- Soil Amendments:** Apply 600 lbs. per acre 10-10-10 fertilizer (34 lbs./1000 sq-ft.) where soil is highly acidic, apply dolomitic limestone at the rate of 1 ton per acre.
- Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 140 lbs. 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 (0.7 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 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.

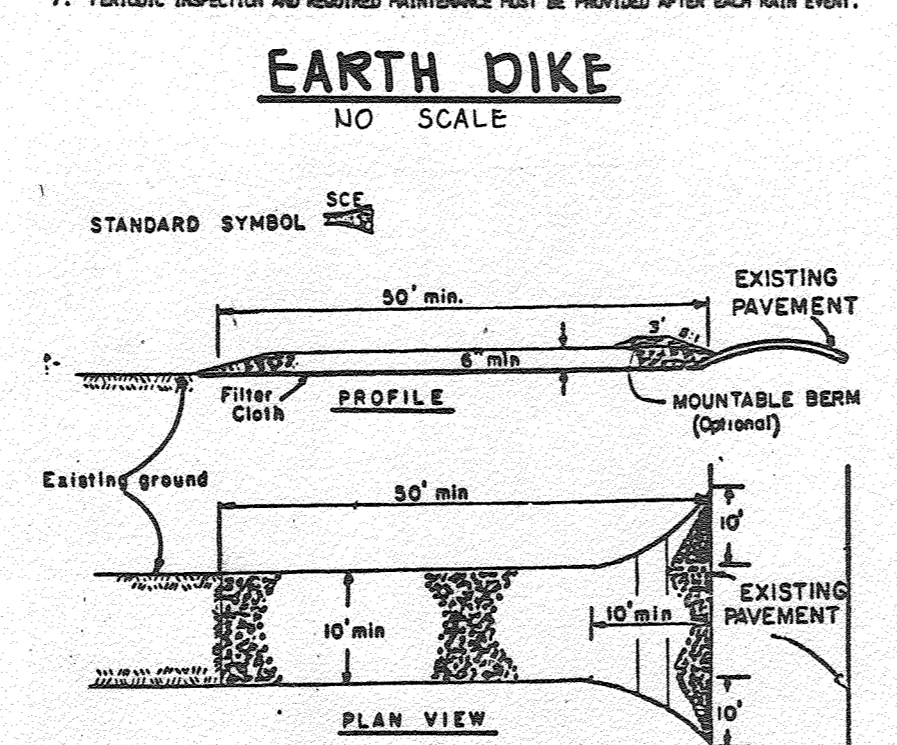


**CONSTRUCTION SPECIFICATIONS**

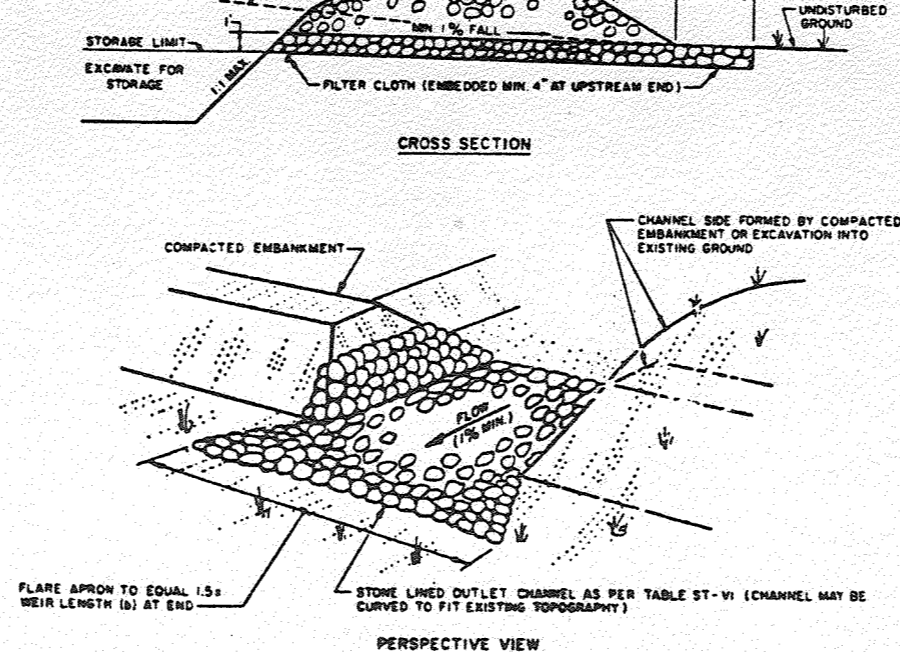
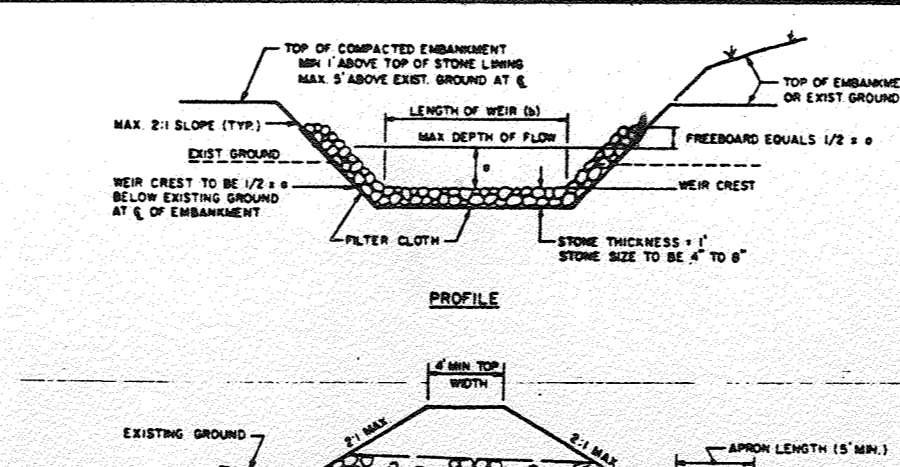
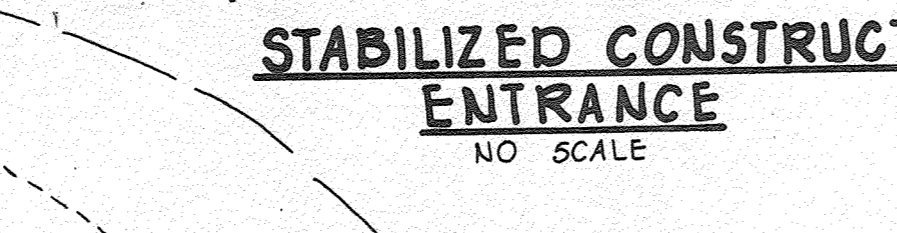
- All dikes shall be constructed by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction equipment.
- Field location should be adjusted as needed to utilize a stabilized safe outlet.
- Each dike 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, on the drainage area above the dike, are not adequately stabilized.
- 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 COURT RECORD.

TYPE OF TREATMENT	CHANNEL TYPE	DIKE A	DIKE B
1	5-3.0X	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0X	SEED AND STRAW MULCH	SEED USING MULCH, OR EXCLUSION, SOU, & STONE
3	5.1-8.0X	SEED WITH MULCH, OR SOU	LINED RIP-RAP 4'-8"
4	8.1-20X	LINED RIP-RAP 4'-8"	ENGINEERING DESIGN

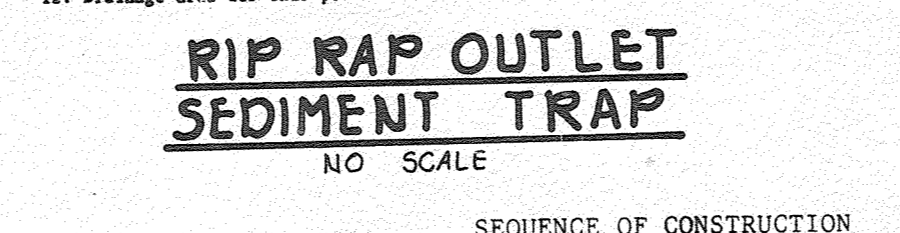
A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.  
 B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 3 INCHES THICKNESS AND PRESSED INTO THE SOIL.  
 C. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.



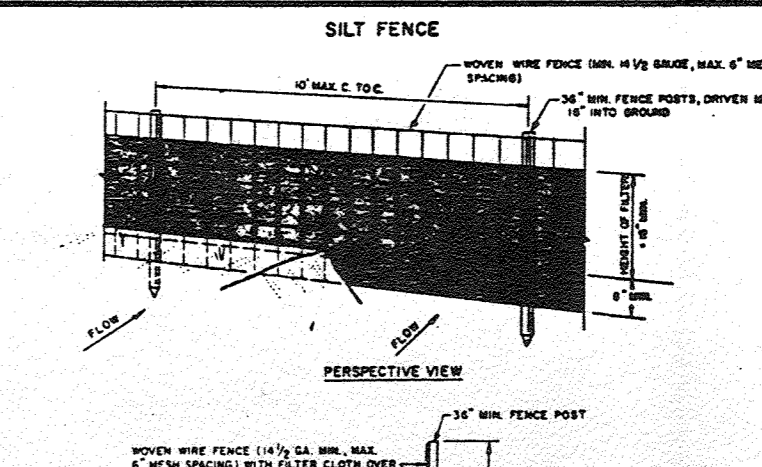
- CONSTRUCTION SPECIFICATIONS**
- Stone Dike - Use 2" stone, or recycled or concrete equivalent.
  - Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
  - Thickness - Not less than six (6) inches.
  - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
  - Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
  - Surface Water - All surface water flowing or directed toward construction entrance shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
  - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone or conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
  - Warning - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
  - Periodic inspection and needed maintenance shall be provided after each rain.



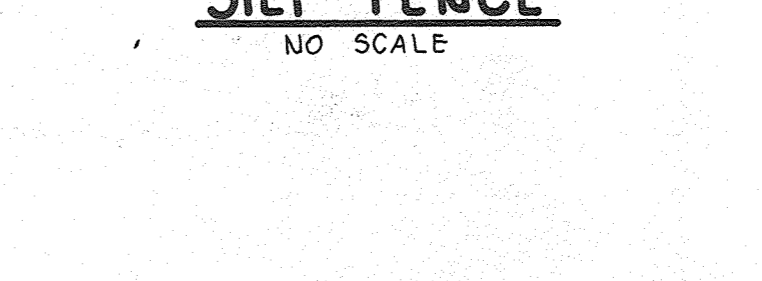
- CONSTRUCTION SPECIFICATIONS**
- The area under embankment shall be cleared, grubbed and stripped of any vegetation and top soil. The pool area shall be cleared.
  - The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be completed by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
  - All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
  - Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
  - Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
  - Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
  - Stone used in the outlet channel shall be four (4) to eight (8) inches (rip-rap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
  - 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. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
  - The structure shall be inspected after each rain and repaired as needed.
  - Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
  - Drainage area for this practice is limited to 15 acres or less.



- SEQUENCE OF CONSTRUCTION**
- OBTAIN A GRADING PERMIT
  - INSTALL STORM DRAIN FROM E-1 TO E-2 AND THEN INSTALL STABILIZED CONSTRUCTION ENTRANCE (1 DAY).
  - INSTALL EARTH DIKE, SILT FENCE AND SEDIMENT TRAPS (3 DAYS).
  - GRADE ROADS WITHOUT DISTURBING SEDIMENT CONTROL DEVICES (10 DAYS).
  - STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES (1 DAYS).
  - INSTALL REMAINING STORM DRAINS (2 DAYS).
  - COMPLETE ROAD CONSTRUCTION.
  - STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES (1 DAY).
  - UPON APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDING NOTES.

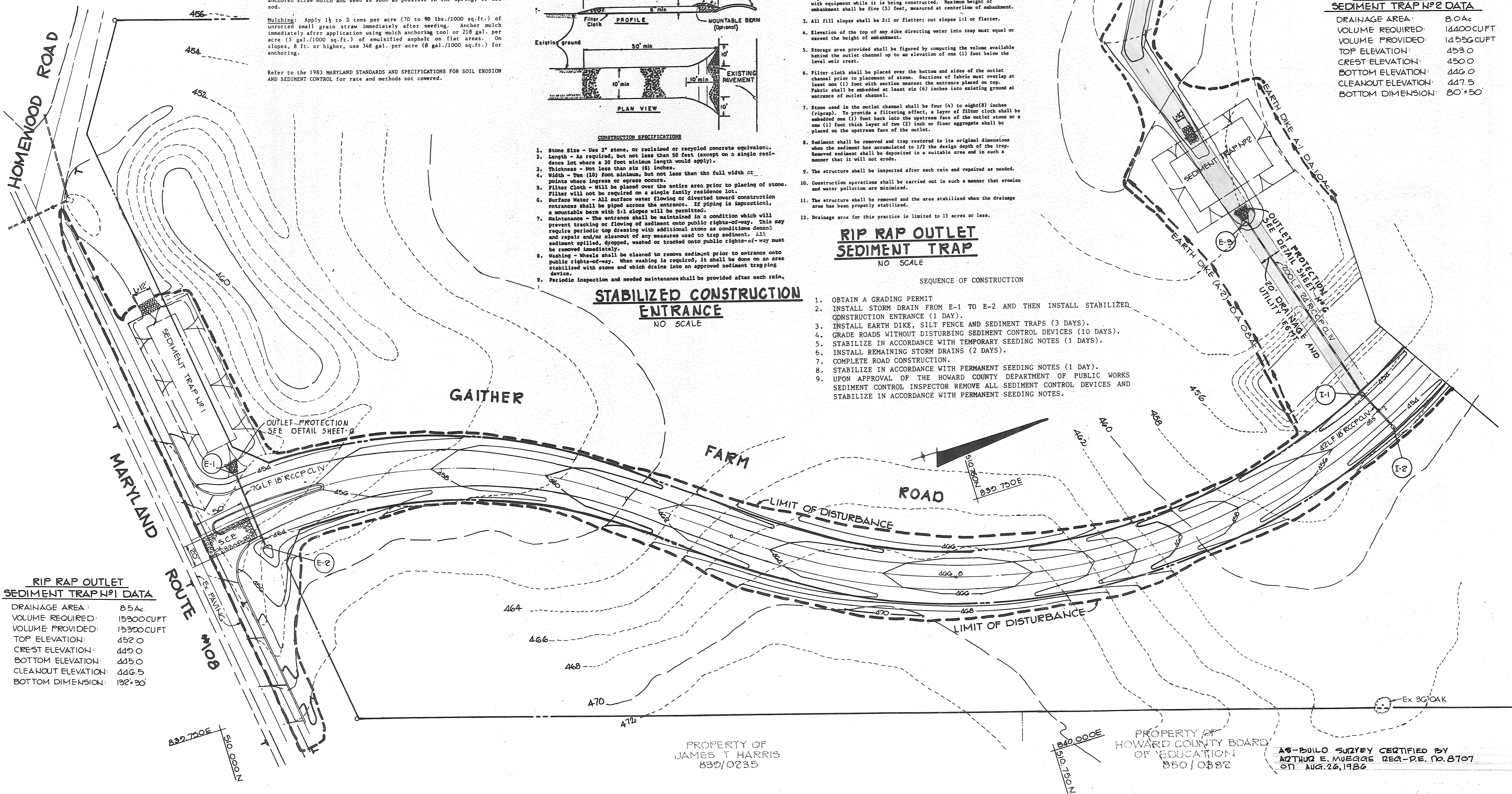


- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- WIRE FENCE MUST BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
  - FILTER CLOTH TO BE FASTENED SECURELY TO WOOD STAPLES WITH TIE STAPLES.
  - WIRE FENCE SHALL BE FASTENED TO WOOD STAPLES WITH TIE STAPLES.
  - MAINTENANCE SHALL BE PROVIDED AS NEEDED. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.
- POSTS: STEEL E-PIPE 1/2" TYPE OR 2" HARDWOOD  
 FENCE: 30" WIRE FENCE, 1/2" GAL. STEEL WIRE FENCE, 1/2" GAL. STEEL WIRE FENCE  
 FILTER CLOTH: FILTER CLOTH, 1/2" GAL. STEEL WIRE FENCE, 1/2" GAL. STEEL WIRE FENCE  
 PREPARED UNIT: 30" WIRE FENCE, 1/2" GAL. STEEL WIRE FENCE, 1/2" GAL. STEEL WIRE FENCE



**RIP RAP OUTLET SEDIMENT TRAP #2 DATA**

DRAINAGE AREA:	80 AC
VOLUME REQUIRED:	14400 CUFT
VOLUME PROVIDED:	14556 CUFT
TOP ELEVATION:	453.0
CREST ELEVATION:	450.0
BOTTOM ELEVATION:	446.0
CLEANOUT ELEVATION:	447.5
BOTTOM DIMENSION:	80' x 50'



**RIP RAP OUTLET SEDIMENT TRAP #1 DATA**

DRAINAGE AREA:	85 AC
VOLUME REQUIRED:	15300 CUFT
VOLUME PROVIDED:	15300 CUFT
TOP ELEVATION:	452.0
CREST ELEVATION:	449.0
BOTTOM ELEVATION:	445.0
CLEANOUT ELEVATION:	446.5
BOTTOM DIMENSION:	132' x 30'

ARTHUR E. MUEGGE 8-26-86  
 ARTHUR E. MUEGGE #8707 DATE

BY THE DEVELOPER:  
 CHRISTINE A. KILBARD 12/12/85  
 DEVELOPER DATE

BY THE ENGINEER:  
 ARTHUR E. MUEGGE 12-18-85  
 ENGINEER DATE

REVIEWED FOR HOWARD S.C.D. NAME  
 AND MEETS TECHNICAL REQUIREMENTS  
 U.S. SOIL CONSERVATION SERVICE 12-18-85  
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 HOWARD S.C.D. 12-18-85  
 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 ARTHUR E. MUEGGE 12-19-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 12-23-85  
 CHIEF, BUREAU OF ENGINEERING DATE

OWNER: PATRICK M'CUAN & WIFE  
 11838, FARSIDE ROAD  
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER: M'CUAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: GAITHER FARM

AREA: TAX MAP #20 PARCEL 1  
 3RD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TITLE: GRADING & SEDIMENT CONTROL

THE RIEMER GROUP, INC.  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

DATE	DESIGNED BY: D.A.M.
	DRAWN BY: J.M.
	PROJECT NO: 18300
	DATE: OCT. 7, 1985
	SCALE: AS SHOWN
	DRAWING NO. 7 OF 11

AS-BUILT F-86-61

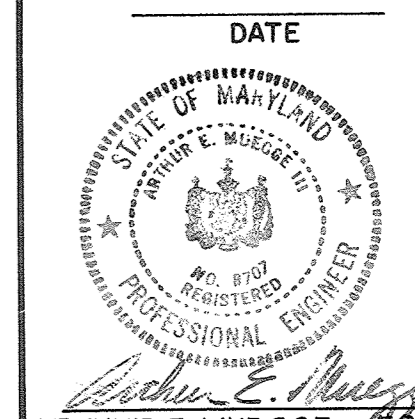
2/8/88

PLAN SCALE: 1"=50'

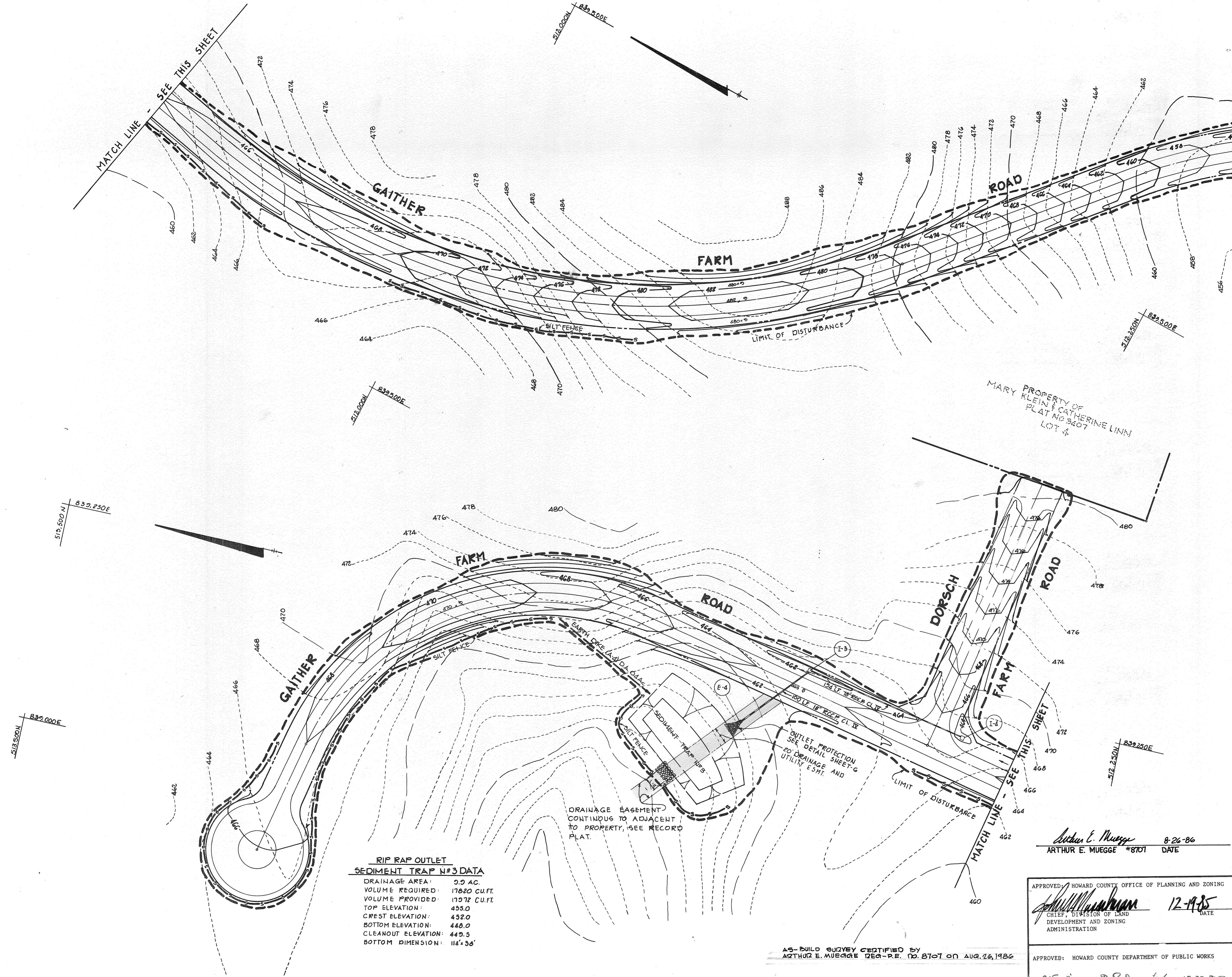
PROPERTY OF JAMES T HARRIS 832/0235

PROPERTY OF HOWARD COUNTY BOARD OF EDUCATION 850/0882

AS-BUILD SURVEY CERTIFIED BY ARTHUR E. MUEGGE REG.-P.E. NO. 8707 ON AUG. 26, 1986







**RIP RAP OUTLET  
SEDIMENT TRAP #3 DATA**

DRAINAGE AREA:	0.0 AC.
VOLUME REQUIRED:	17820 CUFT
VOLUME PROVIDED:	17972 CUFT
TOP ELEVATION:	455.0
CREST ELEVATION:	452.0
BOTTOM ELEVATION:	448.0
CLEANOUT ELEVATION:	449.5
BOTTOM DIMENSION:	114' 36"

DRAINAGE EASEMENT CONTIGUOUS TO ADJACENT TO PROPERTY; SEE RECORD PLAT.

AS-BUILT SURVEY CERTIFIED BY ARTHUR E. MUEGGE REGISTERED PROFESSIONAL ENGINEER NO. 8701 ON AUG. 26, 1986

MARY PROPERTY OF KLEIN, CATHERINE LINN PLAT NO. 8207 LOT 4

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Arthur E. Muegge* 12-19-85  
 ARTHUR E. MUEGGE #8701 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Arthur E. Muegge* 12-23-85  
 ARTHUR E. MUEGGE #8701 DATE

*Arthur E. Muegge* 8-26-86  
 ARTHUR E. MUEGGE #8701 DATE

BY THE DEVELOPER:  
 "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."  
*Christine A. Richards* 12-12-85  
 DEVELOPER DATE

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 SOIL CONSERVATION DISTRICT."  
*Arthur E. Muegge*  
 ENGINEER ARTHUR E. MUEGGE DATE

REVIEWED FOR HOWARD S.C.D. NAME  
 AND MEETS TECHNICAL REQUIREMENTS  
*Stephen L. Fuller* 12-18-85  
 U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*Stephen L. Fuller* 12-18-85  
 HOWARD S.C.D. DATE

5/14/86 REVISOR DORSCH ROAD/ASPER COUNTY COMMENTS  
 DATE NO REVISION

OWNER PATRICK MCCUAN & WIFE  
 11838 FARNSIDE ROAD  
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER MCCUAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: **GAITHER FARM**  
 AREA TAX MAP # 20 PARCEL 1  
 3RD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TITLE: **GRADING AND SEDIMENT CONTROL**

**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2600

DATE	DESIGNED BY: D.A.M.
	DRAWN BY: F.D.M.
	PROJECT NO: 18300
	DATE: OCT. 7, 1985
	SCALE: 1" = 50'
<i>Arthur E. Muegge</i> 12-23-85 ARTHUR E. MUEGGE #8701 DATE	DRAWING NO. 8 OF 17

2/8/88

AS-BUILT

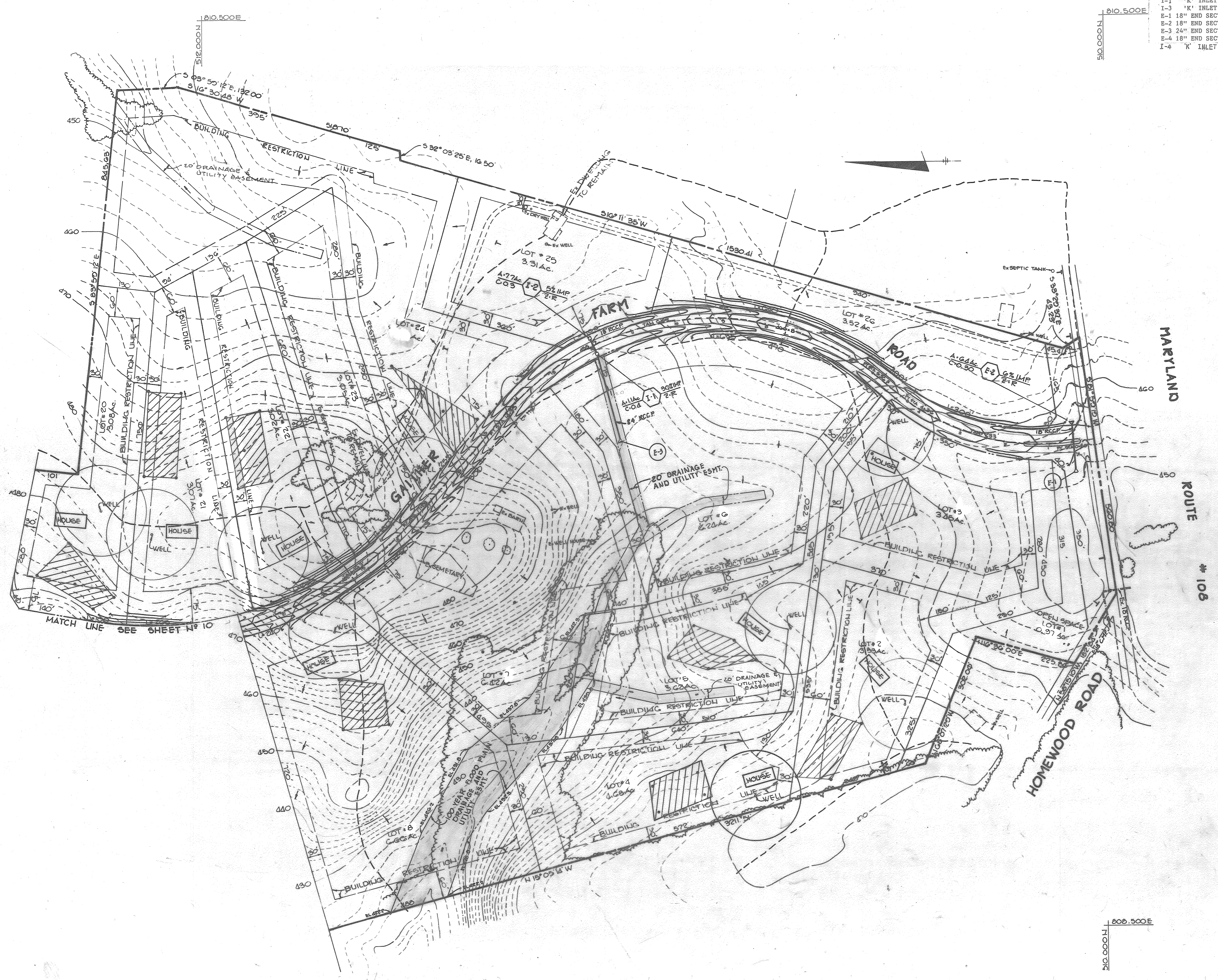
F-86-61

#1165

MARYLAND BLUEPRINT CO., INC. 1985



STRUCTURE SCHEDULE						
NO	TYPE	LOCATION	INV IN	INV OUT	TOP ELEV	REMARKS
I-2	'K' INLET	21' LT CL STA 11+90.67	-----	451.70	454.71	HO CO STD SD 4.12
I-1	'K' INLET	21' RT CL STA 11+90.67	451.09	450.59	454.71	HO CO STD SD 4.12
I-3	'K' INLET	21' RT CL STA 29+17.14	-----	459.75	462.75	HO CO STD SD 4.12
E-1	18" END SECTION	38' LT CL STA 0+64	-----	450.41	-----	HO CO STD SD 5.52
E-2	18" END SECTION	38' RT CL STA 0+64	451.50	-----	-----	HO CO STD SD 5.52
E-3	24" END SECTION	218' LT CL STA 12+37	-----	448.99	-----	HO CO STD SD 5.52
E-4	18" END SECTION	65' LT CL STA 29+65	-----	458.35	-----	HO CO STD SD 5.52
I-4	'K' INLET	21' RT CL STA 27+20.00	-----	460.70	464.80	HQ CO STD SD 4.12



*Arthur E. Muegge*  
 ARTHUR E. MUEGGE #8707 DATE 8-26-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Richard M. ...* 12-19-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William S. ...* 12-23-85  
 CHIEF, BUREAU OF ENGINEERING

DATE NO REVISION  
 OWNER: PATRICK McCLAN EWIFE  
 11838 FARSIDE ROAD  
 ELLICOTT CITY, MARYLAND 21043  
 DEVELOPER: McCLAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: **GAITHER FARM ESTATES**  
 AREA: TAX MAP NO 29 PARCEL-1  
 3<sup>rd</sup> ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 TITLE: **DRAINAGE AREA MAP**

**THE RIEMER GROUP, INC.**  
 A LAND PLANNING, DESIGN & CIVIL ENGINEERING FIRM  
 3105 HEALTH PARK DRIVE, ELLICOTT CITY, MD. 21043 301 461-2600

DATE: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: W.D.S.  
 PROJECT NO: 018300  
 DATE: OCT. 7, 1985  
 SCALE: 1" = 100'  
 DRAWING NO. 9 OF 12

810.500E  
 11000.000N

808.500E  
 11000.000N

#1165

2/8/88

AS-BUILT

F-86-61





*Arthur E. Muegge* 8-26-86  
 ARTHUR E. MUEGGE #8707 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Patrick M. McCall* 12-19-85  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William B. Ryan* 12-23-85  
 CHIEF, BUREAU OF ENGINEERING DATE

5/14/88 Δ REVISED DORSEY FARM ROAD  
 DATE NO REVISION  
 OWNER PATRICK MCCALL & WIFE  
 11838 FARMSIDE ROAD  
 ELLICOTT CITY, MARYLAND 21043

DEVELOPER M'CUAN DEVELOPMENT GROUP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT **GAITHER FARM ESTATES**

AREA TAX MAP # 20 PARCEL 1  
 3RD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TITLE **DRAINAGE AREA MAP**

**THE RIEMER GROUP, INC.**  
 A LAND PLANNING, DESIGN & CIVIL ENGINEERING FIRM  
 3105 HEALTH PARK DRIVE, ELLICOTT CITY, MD. 21043 301 461-2690

	DATE	DESIGNED BY JDP
		DRAWN BY D.A.M.
		PROJECT NO 18300
		DATE OCT. 7, 1983
		SCALE 1"=100'
	DRAWING NO 10 OF 12A	

#1165

NO.	REVISION	DATE
Δ	ADD SHEET 11 TO REFLECT LOT 15 FOREST PLAN, & REV. SHEET NO 7/10/80	7/10/80

2/8/88

ASBUILT



LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING TREES
+	SPOT ELEVATION
---	DENOTES 25% AND GREATER SLOPE
---	DENOTES 12%-24% SLOPES
---	PUBLIC FOREST CONSERVATION EASEMENT (RETENTION)
---	PUBLIC FOREST CONSERVATION EASEMENT (REFORESTATION)
▲	FOREST CONSERVATION SIGN LOCATION

**PLANTING / SOIL SPECIFICATIONS**

- Planting of Nursery Stock Shall Take Place Between March 15th And April 30th Or September 15th And November 15th.
- A Twelve (12) Inch Layer Of Topsoil Shall Be Spread Over All Restoration Areas Impacted By Site Grading To Assure A Suitable Planting Area. If Applicable, Disturbed Areas Shall Be Seeded And Stabilized In Accordance With The Sediment & Erosion Control Plan For This Project. Planting Areas Not Impacted By Site Grading Shall Have No Additional Topsoil Installed.
- All Bare Root Planting Stock Shall Have Their Root System Dipped Into An Anti-Desiccant Gel Prior To Planting.
- Plants Shall Be Installed So That The Top Of The Root Mass Is Level With The Top Of Existing Grade. Backfill In The Planting Pits Shall Consist Of 3 Parts Existing Soil To 1 Part Pine Fines Or Equivalent.
- Fertilizer Shall Consist Of Agriform 22-0-2, Or Equivalent, Applied As Per Manufacturer's Specifications.
- A Two (2) Inch Layer Of Hardwood Mulch Shall Be Placed Over The Root Area Of All Plantings. See Planting Detail.
- Plant Material Shall Be Transported To The Site In A Tarped Or Covered Truck. Plants Shall Be Kept Moist Prior To Planting.
- All Non-Organic Debris Associated With The Planting Operation Shall Be Removed From The Site By The Contractor.

**SEQUENCE OF PLANT INSTALLATION**

- Plants Shall Be Installed And Maintained As Per Notes And Specifications For This Project.
- Upon Completion Of The Plantings, Signage Shall Be Installed As Per The Signage Detail.
- Plantings Shall Be Guaranteed And Maintained In Accordance With The "Guarantee Requirements" And "Maintenance Of Plantings" Associated With This Project.

**MULTIFLORA ROSE CONTROL NOTE:**

**PROHIBIT PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED.** Removal Of The Multiflora Rose May Be Performed With Mowing And Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species Occurring Within The Rose Thickets Should Be Retained Wherever Possible. Herbicide Treatments Shall Occur On Two (2) Month Intervals During The First Growing Season And Once In The Spring And Once In The Fall For Subsequent Years. Herbicide Used Shall Be Made Specifically To Address Woody Plant Material And Shall Be Applied As Per Manufacturer's Specifications. Care should be Taken Not To Spray Planted Trees Or Naturally Occurring Native Tree And Shrub Seedlings. It Is Recommended That Initiation Of Rose Removal Begin At Least Six Months Prior To Planting So That New Growth Of Roses Is Able To Be More Successfully Managed.

**FOREST PROTECTION GENERAL NOTES**

- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING, AS NECESSARY, AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES, UNLESS ROOT PRUNING IS PROPOSED.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE MOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
- REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

**REFORESTATION PLANTING NOTES**

- Plants, Related Material, And Operations Shall Meet The Detailed Description As Given On The Plans And As Described Herein.
- Plant Material, Unless Otherwise Specified, Shall Be Nursery Grown, Uniformly Branched And Have A Vigorous Root System. Plant Material Shall Be Healthy, Vigorous Plants Free From Defects, Decay, Disfiguring Roots, Sunscald Injuries, Abrasions Of The Bark, Plant Diseases, Insect Pest Eggs, Boxers, Infestations Or Objectionable Disfigurements. Plant Material That Is Weak Or Which Has Been Cut Back From Larger Grades To Meet Specified Requirements Will Be Rejected. Trees With Forked Leaders Will Not Be Accepted. Plants shall be Freshly dug; No Heeled-In Plants Or Plants From Cold Storage Will Be Accepted.
- Unless Otherwise Specified, Plant Material Shall Conform To "American Standard For Nursery Stock" ANSI Z60.1-1990, Published By The American Association Of Nurserymen, Including All Addenda.
- Contractor Will Be Required To Guarantee Plant Material For A Period Of Two (2) Years After The Date Of Acceptance And Maintain A 75% Survivability At The End Of The Two (2) Years.
- To Lessen The Chance Of Loss, The Plantings Should Be Checked From Time To Time To Insure That They Are Receiving Sufficient Water. See "Maintenance Of Plantings" For Guidelines.
- The Location And Orientation Of All Plant Material Shall Be Randomly Planted In Designated Reforestation Areas By The Contractor. Contractor Shall Be Responsible For Moving Any Plant Material Installed Without Approval.
- Mowing And Applying Herbicides To The Reforestation Area Is Prohibited At Any An All Stages Of The Planting Process In Order To Encourage The Existing Saplings To Grow.
- Contractor Is Responsible For Installing And Pruning Plant Material In The Proper Planting Season For Each Plant Type. See Tree Planting & Maintenance Calendar.
- Upon Completion Of Installation, Signage Shall Be Installed As Shown.

**MAINTENANCE OF PLANTINGS**

- Maintenance Of Plantings Shall Last For A Period Of 26 Months.
- All Plant Material Shall Be Generally Watered Twice A Month During The 1st Growing Season. Watering May Be More Or Less Frequent Depending On Weather Conditions.
- During The 2nd Growing Season, Plant Material Shall Be Watered Once A Month From May To September, As Needed.
- Invasive Exotics And Noxious Weeds Shall Be Removed From The Reforestation Area(s). Old Field Successional Species Shall Be Retained.
- Plants Shall Be Examined A Minimum Of Two (2) Times During The Growing Season For Serious Plant Pests And Diseases With The Appropriate Agent.
- Dead Branched Shall Be Pruned From The Plantings.

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 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21104  
 410.451.2000

**OWNER/DEVELOPER**  
 DOUGLAS R. BRUNNER  
 1200 STUART ST.  
 UNIT 1511  
 BALTIMORE, MD 21230  
 PHONE: 410-963-1678

**GUARANTEE REQUIREMENTS**

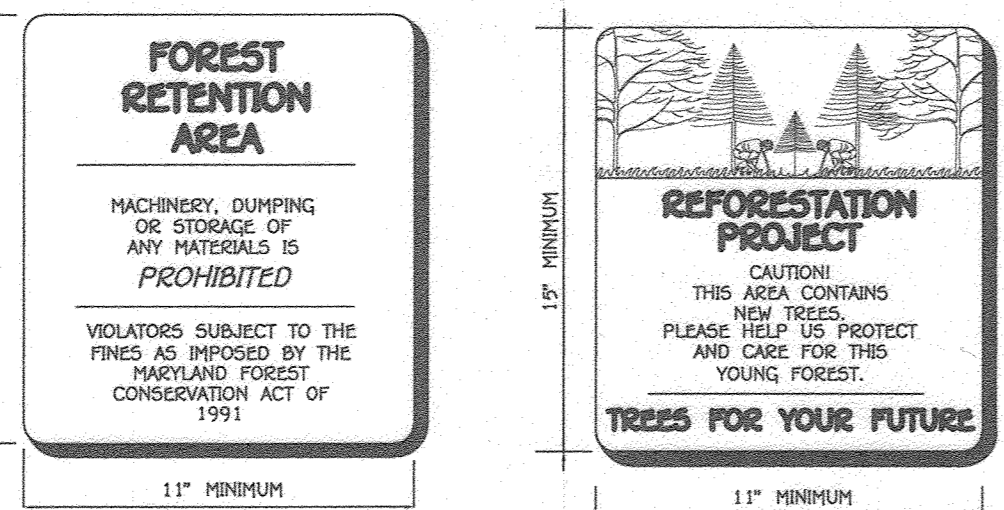
A 75% Survival Rate For The Reforestation Plantings Is Required At The End Of The 24 Month Maintenance Period. All Plant Material Below The 75% Threshold Is Required To Be Replaced At The Beginning Of The Next Growing Season.

**PRE-CONSTRUCTION MEETING**

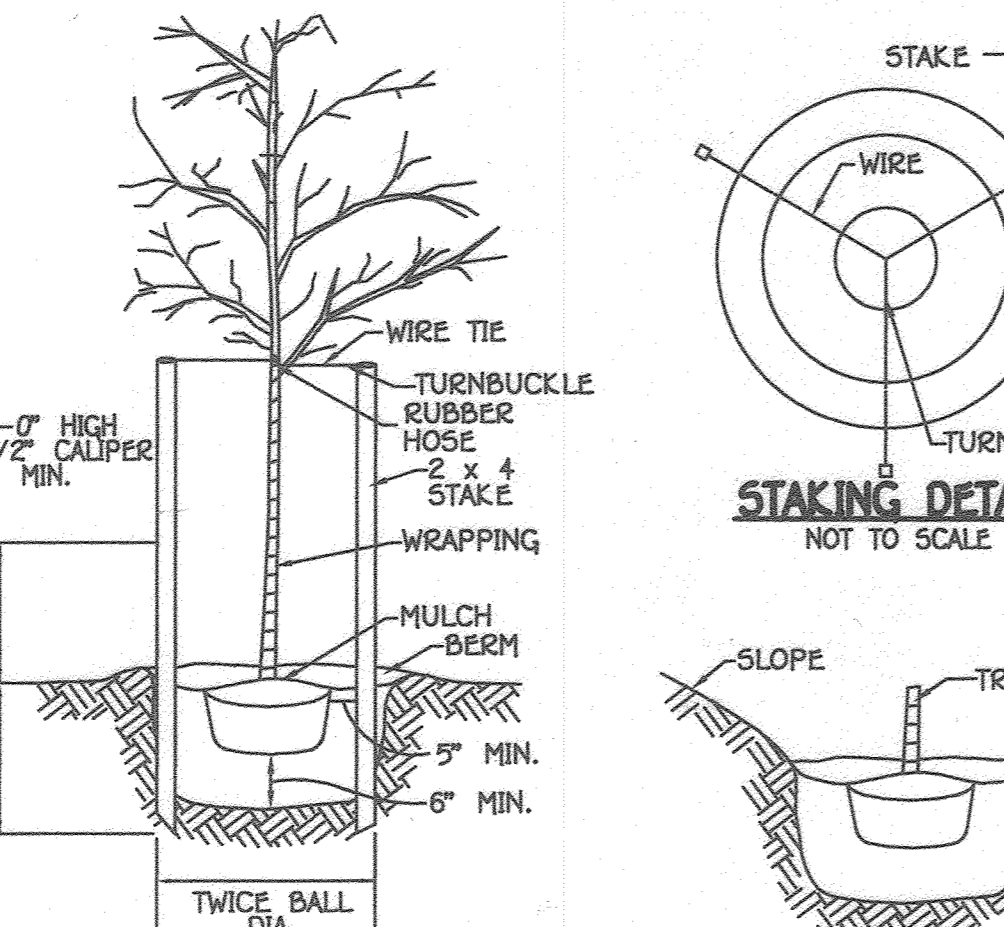
- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
  - TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
  - INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
  - MAKE ALL NECESSARY ADJUSTMENTS;
  - ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

**CONSTRUCTION MONITORING**

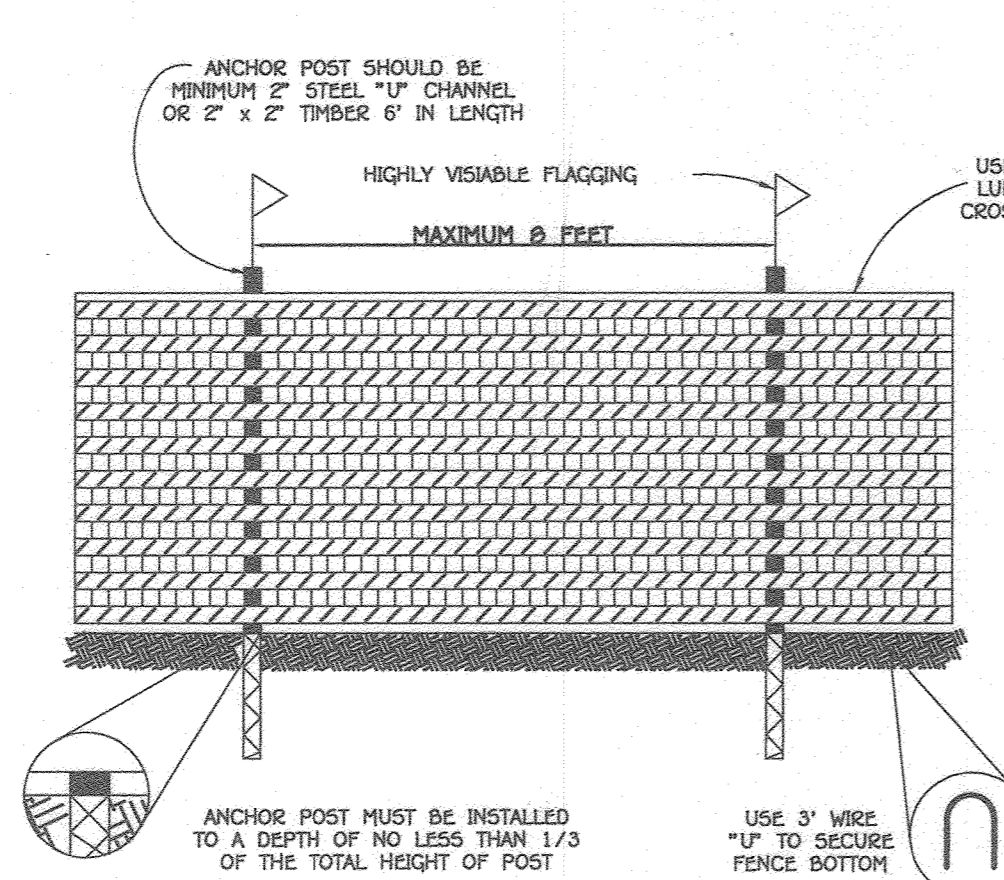
- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
- ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBOREST.
- THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.



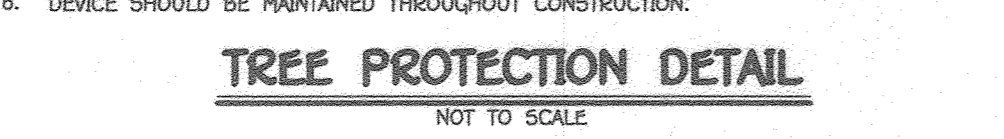
**FOREST CONSERVATION SIGN DETAIL**  
 NOT TO SCALE



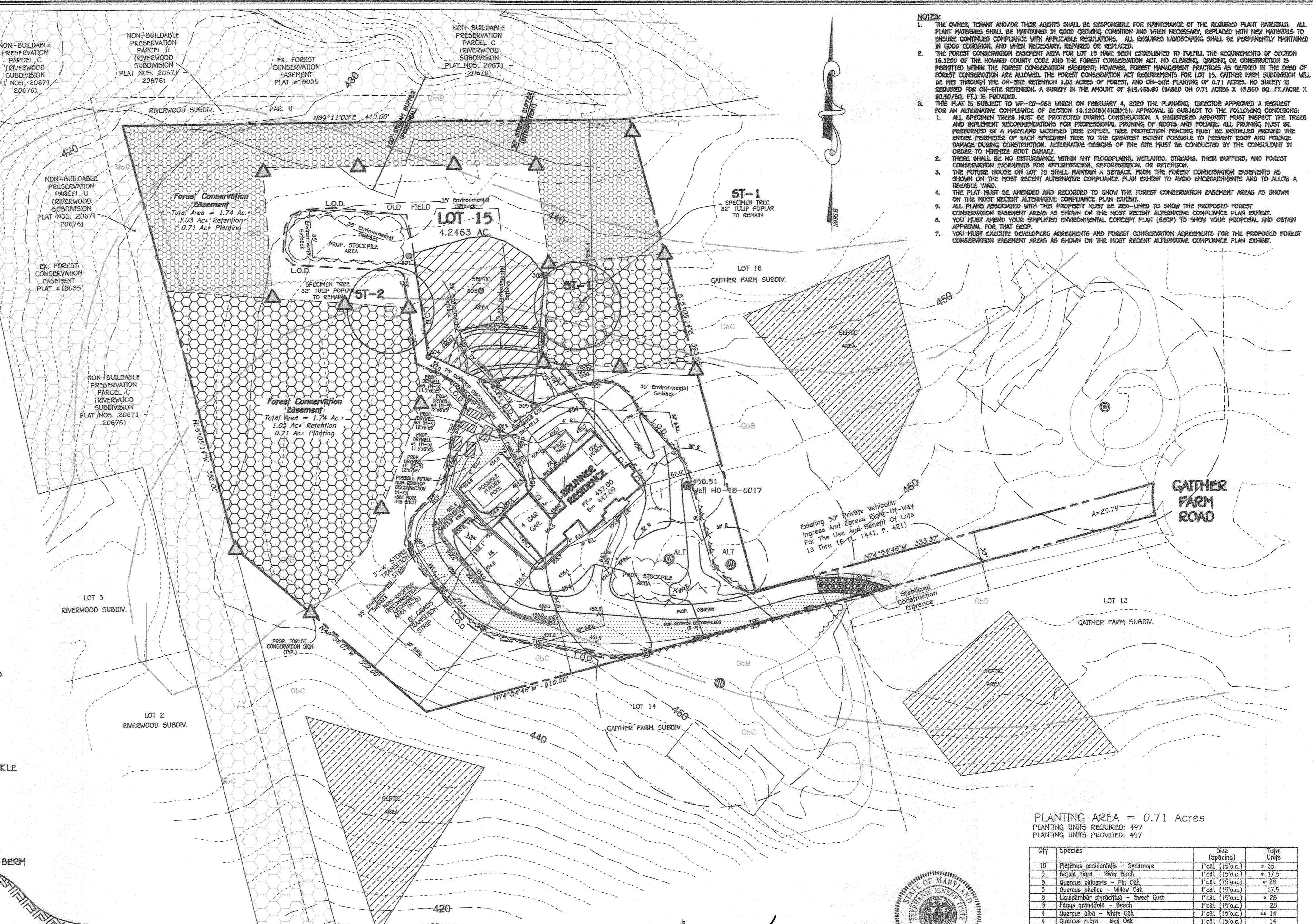
**STAKING DETAIL**  
 NOT TO SCALE



**DEVELOPER'S CERTIFICATE**  
 BLAZE ORANGE PLASTIC MESH



**TREE PROTECTION DETAIL**  
 NOT TO SCALE



**NOTES:**

- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED PLANT MATERIALS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPLACED OR REPAIRED.
- THE FOREST CONSERVATION EASEMENT AREA FOR LOT 15 HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.10 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. NO CLEARING, GRUBBING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION ARE ALLOWED. THE FOREST CONSERVATION ACT REQUIREMENTS FOR LOT 15, GATHER FARM SUBDIVISION WILL BE MET THROUGH THE 1.03 ACRES OF FOREST, AND ON-SITE PLANTING OF 0.71 ACRES. NO SURVEY IS REQUIRED FOR ON-SITE RETENTION. A SURVEY IN THE AMOUNT OF \$15,463.00 (BASED ON 0.71 ACRES X \$43,900.00/ACRE X 0.6020/FEET) IS PROVIDED.
- THIS PLAN IS SUBJECT TO HP-20-066 WHICH ON FEBRUARY 4, 2020 THE PLANNING DIRECTOR APPROVED A REQUEST FOR AN ALTERNATIVE COMPLIANCE PLAN FOR SECTION 16.1020(A)(2)(B). APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
  - ALL SPECIMEN TREES MUST BE PROTECTED DURING CONSTRUCTION. A RESTORATION AGREEMENT MUST PROTECT THE TREES AND IMPLEMENT RECOMMENDATIONS FOR PROFESSIONAL PRUNING OF ROOTS AND FOLIAGE. ALL PRUNING MUST BE PERFORMED BY A HANDBOOK LICENSED TREE CARE PROFESSIONAL. TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE CRITICAL PERIPHERY OF EACH SPECIMEN TREE TO THE GREATEST EXTENT POSSIBLE TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION. ALTERNATIVE DESIGNS OF THE SITE MUST BE CONDUCTED BY THE CONSULTANT IN ORDER TO MINIMIZE ROOT DAMAGE.
  - TREES SHALL BE NO DISTURBANCE WITHIN ANY FLOODPLAINS, WETLANDS, STREAMS, THEIR BUFFERS, AND FOREST CONSERVATION EASEMENTS FOR AFFORESTATION, REFORESTATION, OR RETENTION.
  - THE FUTURE HOUSE ON LOT 15 SHALL MAINTAIN A SETBACK FROM THE FOREST CONSERVATION EASEMENTS AS SHOWN ON THE MOST RECENT ALTERNATIVE COMPLIANCE PLAN EXHIBIT TO AVOID ENCROACHMENTS AND TO ALLOW A USABLE YARD.
  - THE PLAN MUST BE AMENDED AND RECORDED TO SHOW THE FOREST CONSERVATION EASEMENT AREAS AS SHOWN ON THE MOST RECENT ALTERNATIVE COMPLIANCE PLAN EXHIBIT.
  - ALL PLANS ASSOCIATED WITH THIS PROPERTY MUST BE 200-LINED TO SHOW THE PROPOSED FOREST CONSERVATION EASEMENT AREAS AS SHOWN ON THE MOST RECENT ALTERNATIVE COMPLIANCE PLAN EXHIBIT.
  - YOU MUST AVOID YOUR EMPLOYED ENVIRONMENTAL CONCEPT PLAN (ECCP) TO SHOW YOUR PROPOSAL, AND OBTAIN APPROVAL FOR THAT ECCP.
  - YOU MUST EXECUTE DEVELOPER'S AGREEMENTS AND FOREST CONSERVATION AGREEMENTS FOR THE PROPOSED FOREST CONSERVATION EASEMENT AREAS AS SHOWN ON THE MOST RECENT ALTERNATIVE COMPLIANCE PLAN EXHIBIT.

*Stephen L. Lutz* 10/19/20  
 DNG QUALIFIED PROFESSIONAL DATE



PLANTING AREA = 0.71 Acres  
 PLANTING UNITS REQUIRED: 497  
 PLANTING UNITS PROVIDED: 497

Qty	Species	Size (Spacing)	Total Units	
10	Pinus occidentalis - Sycamore	1" Cal. (15x15)	435	
5	Betula nigra - Silver Birch	1" Cal. (15x15)	117.5	
8	Quercus palustris - Pin Oak	1" Cal. (15x15)	228	
5	Quercus phellos - Willow Oak	1" Cal. (15x15)	117.5	
8	Liquidambar styraciflua - Sweet Gum	1" Cal. (15x15)	228	
8	Fagus grandifolia - Beech	1" Cal. (15x15)	228	
4	Quercus alba - White Oak	1" Cal. (15x15)	114	
10	Acer rubrum - Red Maple	1" Cal. (15x15)	435	
4	Quercus velutina - Black Oak	1" Cal. (15x15)	114	
4	Quercus marilandica - Chestnut Oak	1" Cal. (15x15)	114	
10	Acer rubrum - Red Maple	1" Cal. (15x15)	435	
6	Acer negundo - Box Elder	1" Cal. (15x15)	217.5	
10	Liriodendron tulipifera - Tulip Poplar	1" Cal. (15x15)	435	
10	Juglans nigra - Black Walnut	1" Cal. (15x15)	435	
8	Carya ovata - Shagbark Hickory	1" Cal. (15x15)	228	
8	Carya tomentosa - Hickory Hickory	1" Cal. (15x15)	228	
10	Pinus strobus - White Pine	1" Cal. (15x15)	435	
10	Cornus florida - Dogwood	1" Cal. (15x15)	435	
10	Cercis canadensis - Redbud	1" Cal. (15x15)	435	
			Total unit credit	497

\* -species should be planted in or adjacent to stream buffer  
 \*\* -species should be planted in upland areas only

**FOREST CONSERVATION WORKSHEET**

Project: Gather Hunt Lot 15  
 Date: January 3, 2020

NET TRACT AREA	Acres
A. Total tract area	4.2
B. Area within 100 Year Floodplain	0
C. Area of existing impervious surface/unchanged use	0
D. Net Tract Area	4.2

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)  
 ARA MDR IDA HDR MPD CIA  
 R-20

E. Afforestation Threshold (percentage)	20	0.8
F. Conservation Threshold (percentage)	25	1.1

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain)	2.9
H. Area of forest above afforestation threshold	2.1
I. Area of forest above conservation threshold	1.8

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation	1.4
K. Clearing permitted without mitigation	1.5

PROPOSED FOREST CLEARING

L. Total area of forest to be Cleared or Retained Outside FCE	1.9
M. Total area of forest to be Retained in FCE	1.0

PLANTING REQUIREMENTS

N. Reforestation for clearing above Conservation Threshold	0.5
P. Reforestation for clearing below Conservation Threshold	0.2
Q. Credit for retention above conservation threshold	0
R. Total reforestation required	0.7
S. Total afforestation required	0
T. Total reforestation and afforestation required	0.7

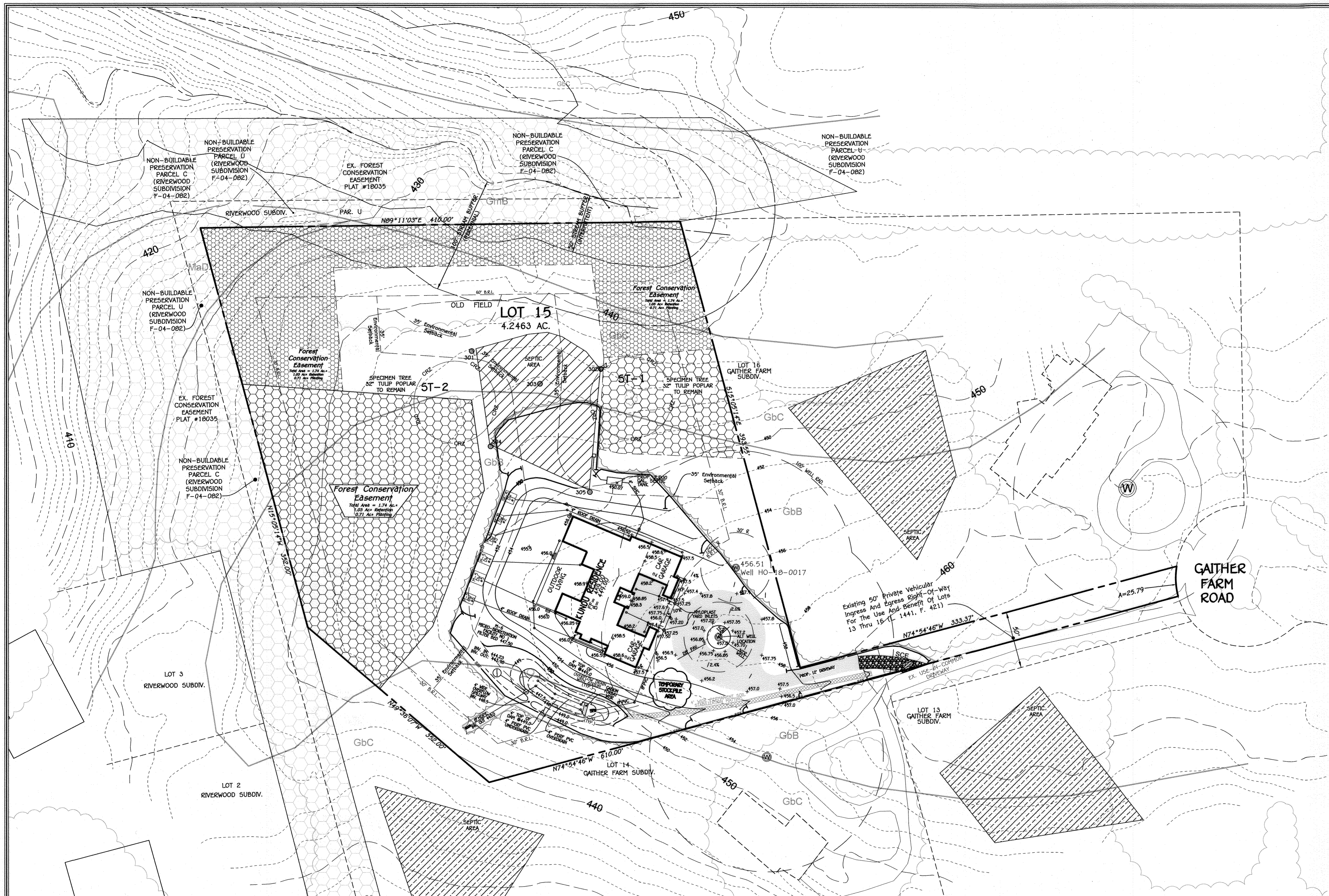
**REFER TO SHEET 12 FOR HOUSE SITING AND GRADING.**

APPROVED: DEPARTMENT OF PLANNING AND ZONING

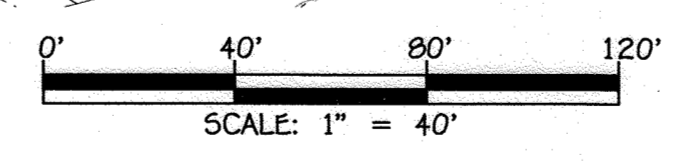
NO.	DESCRIPTION	DATE
2	REFER TO SHEET 12 FOR HOUSE SITING AND GRADING	11/10/20

**FOREST CONSERVATION AND GRADING PLAN**  
**GATHER FARM LOT 15**  
 ZONED: RC-DEO  
 TAX MAP NO.: 29 GRID NO.: 10 PARCEL NO.: 1  
 THIRD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DATE: JUNE 11, 2020  
 REVISED: OCTOBER 12, 2020





LEGEND	
SYMBOL	DESCRIPTION
--- 440 ---	EXISTING CONTOUR 2' INTERVAL
--- 450 ---	EXISTING CONTOUR 10' INTERVAL
--- 442 ---	PROPOSED CONTOUR 2' INTERVAL
--- 440 ---	PROPOSED CONTOUR 10' INTERVAL
[Pattern]	PROPOSED MACADAM PAVING
[Pattern]	CISTERN IRRIGATION AREA
[Pattern]	EXISTING TREELINE
[Pattern]	PROPOSED TREELINE
[Pattern]	SOILS DELINEATION
[Pattern]	SUPER SILT FENCE
[Pattern]	LIMIT OF DISTURBANCE
[Symbol]	EXISTING TREE
[Symbol]	EXISTING TREE TO BE REMOVED
[Symbol]	CRITICAL ROOT ZONE
[Symbol]	EARTH DICE
[Symbol]	TEMPORARY GABION OUTLET STRUCTURE
[Symbol]	EXISTING WELL
[Symbol]	HIGHER FREQUENCY STORM FLOW PATH
[Symbol]	OVERLAND FLOW ARROWS
[Symbol]	PIPE FLOW ARROWS
[Symbol]	SOIL BORINGS
[Symbol]	EROSION CONTROL MATTING
[Symbol]	AT-GRADE INLET PROTECTION



APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT, 12/14/23 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION, 12/14/23 DATE

REVISIONS		
NO.	DESCRIPTION	DATE



**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/25.

Frank John Manalangan  
FRANK JOHN MANALANGAN, L.S.

11/30/23  
Date

**OWNER/DEVELOPER**

GOUTAM KUNDU  
7527 TALBOTS WOODS COURT  
ELLCOTT CITY, MD 21043  
PHONE: 410-786-1015

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ELLCOTT CITY, MARYLAND 21042  
(410) 661-2995

**SITE AND GRADING PLAN  
GAITHER FARM  
LOT 15**

ZONED: RC-DEO  
TAX MAP NO.: 29 GRID NO.: 10 PARCEL NO.: 1  
THIRD ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
DATE: OCTOBER 18, 2023  
DRAWING 12 OF 12