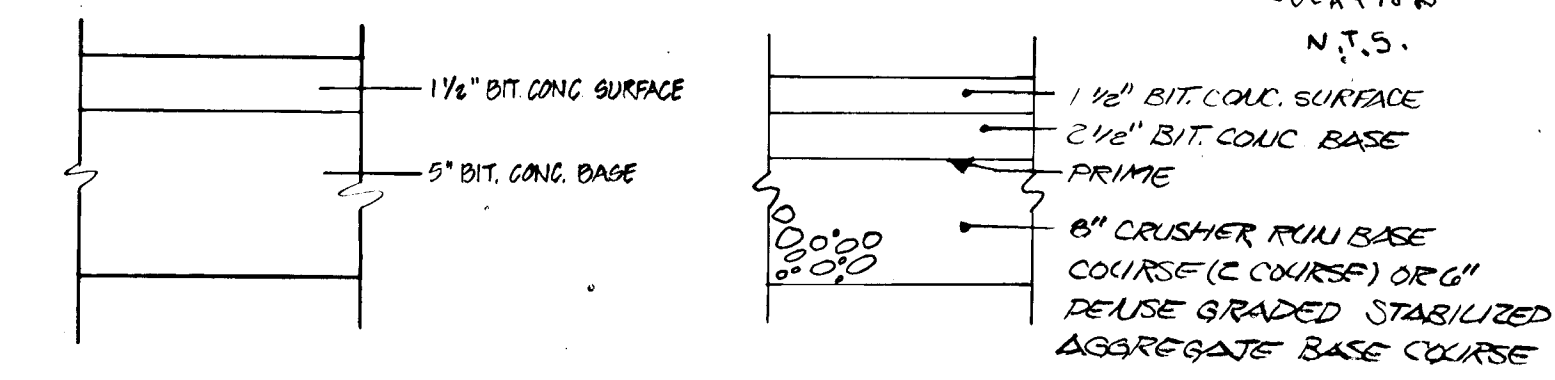


1. PROFILE GRADE LINE (P.G.L.) - SEE DESIGN MANUAL.
2. TYPE OF CURB VARIES (BUTYRUMINOUS CURB OR MOD. COMB. CURB & BUTTER OR STD. COMB. CURB & BUTTER - SEE DESIGN MANUAL.)
3. INDICATES 2" TOPSOIL, SEED, AND MULCH.

TYPICAL SECTION

CUL-DE-SAC ZONED R-20 DESIGN SPEED: 30 MPH
NOT TO SCALE



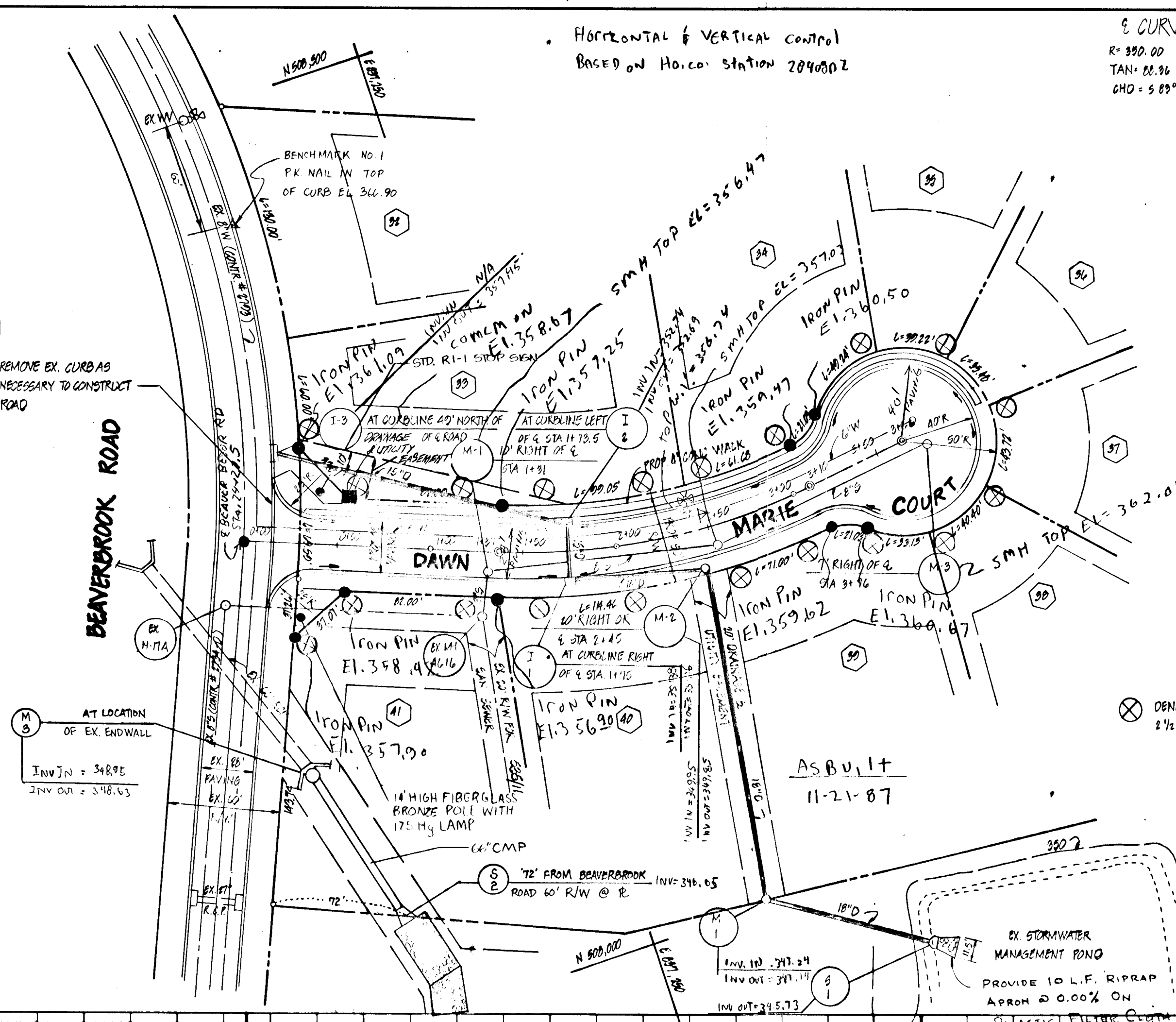
PAVING SECTIONS P-2
NOT TO SCALE

STRUCTURE SCHEDULE					
NO.	TYPE	INW. IN.	INW. OUT.	TOP EL.	REMARKS
J-1	A-5	322.00	321.50	322.50	ST. DET. 50'-4.01
J-2	A-5	322.00	321.50	322.50	ST. DET. 50'-4.01
J-3	A-10 W/OFR.	322.00	321.50	322.50	ST. DET. 50'-4.01
M-1	SHULDER PRECAST MH	347.00	347.00	347.00	ST. DET. 6'-5.12
M-2	PRECAST MH	350.00	350.00	350.00	ST. DET. 6'-5.12
S-1	CONCRETE END SECTION	348.00	348.00	348.00	ST. DET. 60'-5.52
M-3	PRECAST MH	348.00	348.00	348.00	ST. DET. 11'-9'-5.32
S-2	METAL END SECTION	348.00	348.00	348.00	ST. DET. 11'-9'-5.01

DATE	DESCRIPTION	NAME
6-1-87	P-2 CRUSHER RUN PAVING	JCO

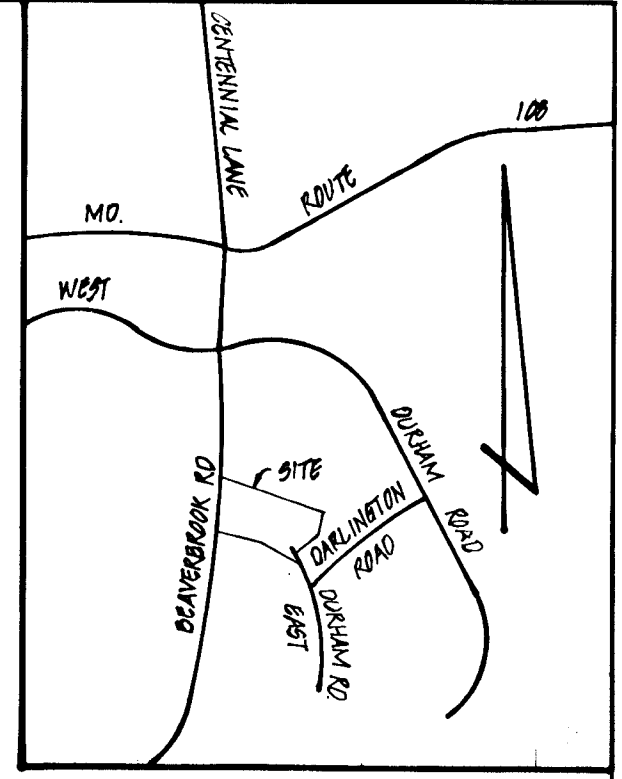
HORIZONTAL & VERTICAL CONTROL
BASED ON HO. CO. STATION 289400Z

CURVE DATA
R= 390.00 L= 173.10'
TAN= 66.36 Δ= 45°20'12"
CHD= 5.89' 19°31' E 171.34'



- NOTES
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.
 2. STOP SIGN TO BE IN ACCORDANCE WITH HOWARD COUNTY TRAFFIC DIVISION SPECIFICATION R.1-1.

- GENERAL NOTES
1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY SPECIFICATIONS AND STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
 2. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH, AND CHARACTER OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGE INCURRED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 3. THE CONTRACTOR SHALL TEST ALL EXISTING UTILITIES AT LEAST FIVE (5) FEET BEFORE EXCAVATION WORK BEGINS ON THESE UTILITIES.
 4. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE EXCAVATION WORK ON THESE UTILITIES:
 - MISC. UTILITIES: 555-0100
 - WELL DISTRICT SYSTEM: 555-3443
 - SEWER DISTRICT SYSTEM: 555-3555 OR 3534
 - BALTIMORE GAS AND ELECTRIC COMPANY: 555-0500, EXT. 691
 - HOWARD COUNTY PUBLIC UTILITIES DEPARTMENT: 555-3333 OR 555-3334
 - HOWARD COUNTY COMMUNICATIONS DEPARTMENT: 555-3333 OR 555-3334
 - STATE DEPARTMENT OF TRANSPORTATION: 793-7333
 5. ALL EXCAVATIONS SHALL BE CONSTRUCTED TO ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS.
 6. ALL EXCAVATION SHORING SHALL HAVE 30.0" RADIUS CURVES.
 7. STORM DRAIN TRENCHES WITHIN ROAD RIGHT-OF-WAY SHALL BE CONSTRUCTED AND PROTECTED TO ACCORDANCE WITH HOWARD COUNTY PUBLIC MANUAL, REVISED 21. S.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
 8. INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 9. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE EXCAVATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
 10. DESIGNATED TRAFFIC SPEED IS IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS STANDARDS.
 11. ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
 12. ALL FIELD AREA WITHIN BOUNDARIES AND BOUND STRUCTURES TO BE CONSTRUCTED TO A FINISH OF 5% CONSTRUCTION.
 13. ALL EXISTING ELEVATIONS SHOWN ARE EXISTING ELEVATIONS.
 14. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO ROAD BOUNDARIES.
 15. EXISTING PROPERTY BOUNDARY R-20 PER 0-02-85 COMPREHENSIVE ZONING PLAN.
 16. STOP SIGN FROM FIELD SIGN SHOWN ABOVE.
 17. EXCAVATION SHALL BE MADE WITHIN ONE (1) WEEK OF EXCAVATION HAVE BEEN APPROVED BY THE ENGINEER.
 18. ALL STORM DRAIN PIPE EXPOSURE SHALL BE CLASSIFIED "B" SHOWN IN FIG. 11.6, VOLUME 3 OF HOWARD COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 19. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES UNDER THE SITE UNDER F-64-1809.



VICINITY MAP
1"=100'



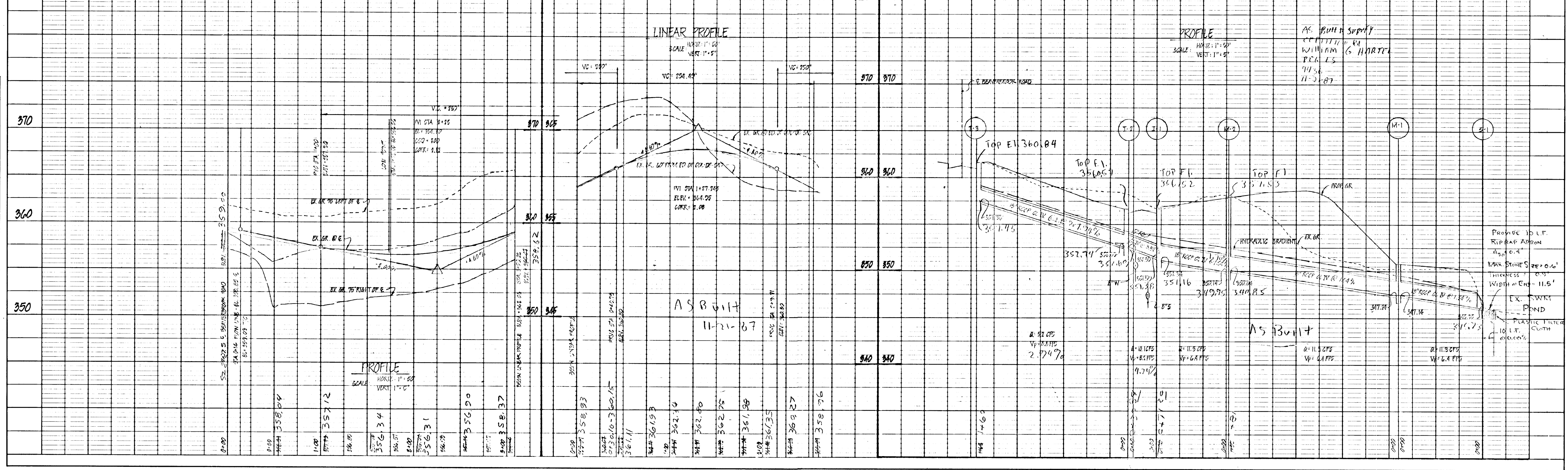
OWNER / DEVELOPER
WILLIAM A. CASALE
4004 BEAVERBROOK ROAD
COLUMBIA, MARYLAND 21044

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
DATE: 8-25-87

APPROVED: OFFICE OF PLANNING & ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
DATE: 8-27-87

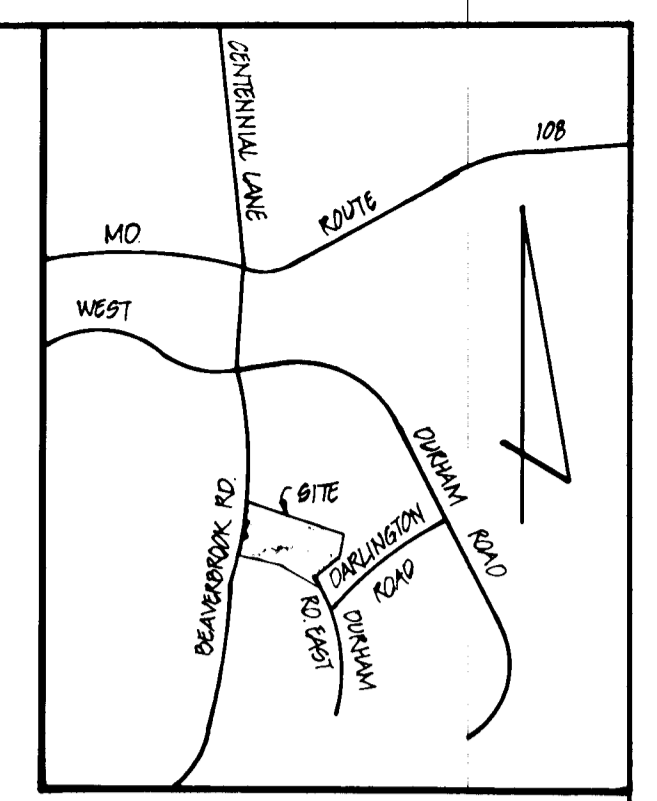
TITLE: ROAD CONSTRUCTION PLAN
PROJECT: BEAVERBROOK-SECTION II, AREA 3
LOCATION: 8TH ELECTION DISTRICT TAX MAP 30 HOWARD CO. MD.
SCALE: AS SHOWN
DESIGNED BY: WH
DRAWN BY: D.P.
CHECKED BY: D.P.
DATE: 8/27, 1985
FIELD BOOK: PAGE NO.: JOB NO.: DRAWING NO.:
20178 1 OF 4

boender associates inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3585 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
1801 465-7777



BENCHMARKS

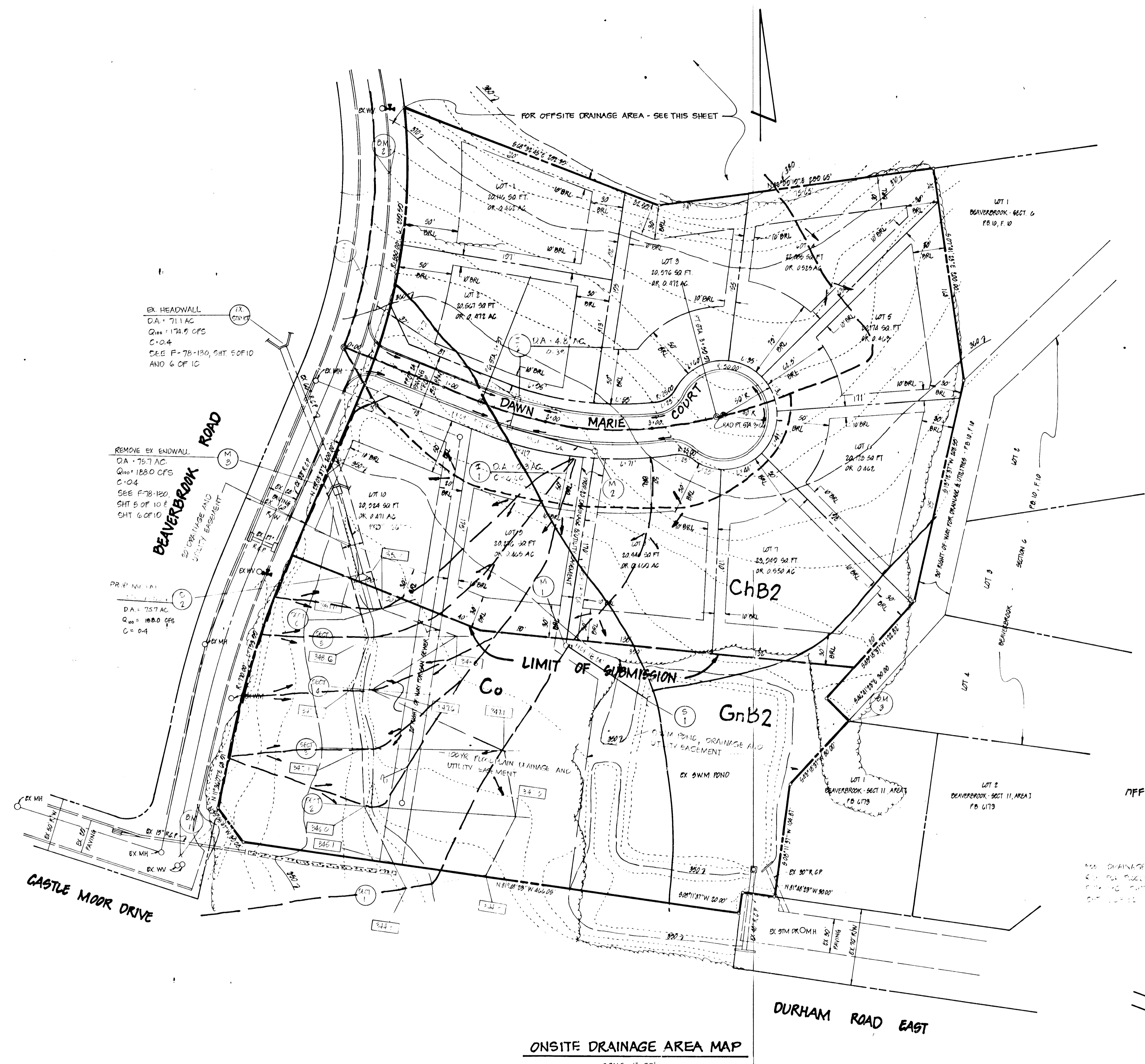
B.M.#1 - PK. NAIL IN EX. BRVING 11' EAST OF BENTH.
 EL. = 342.46
 B.M.#2 - PK. IN CURB 60' SOUTH OF FIRE HYDRANT
 EL. = 344.00
 B.M.#3 - IRON PIPE GOR. LOTS 1 AND 4
 EL. = 359.21



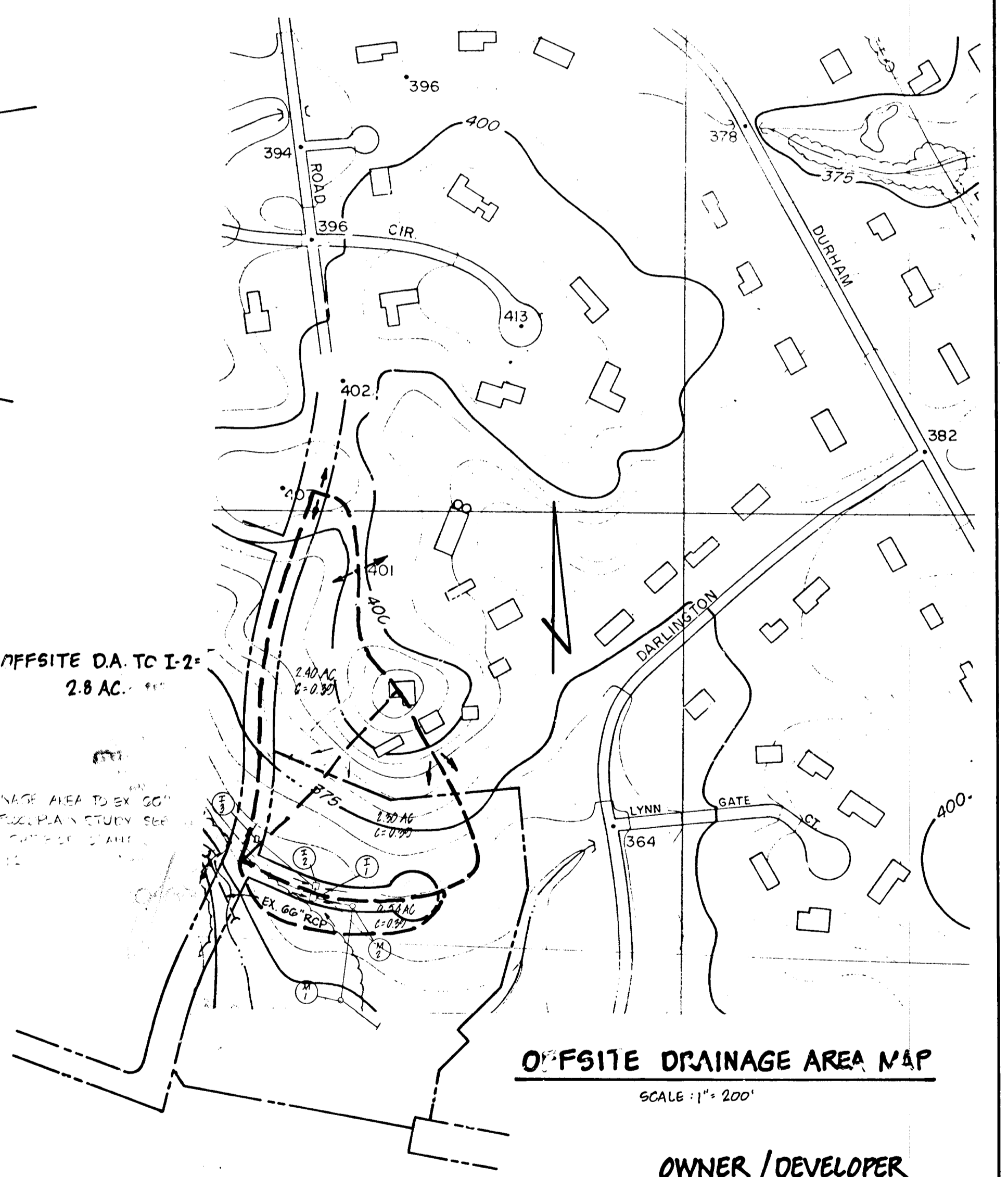
VICINITY MAP
 SCALE: 1" = 1200'

GENERAL NOTES

- TAX MAP 30, PARCEL 209
- PROPERTY DEED REFERENCE: 856/148
- EX. ZONING: R-20
- PUBLIC WATER AND PUBLIC SEWERAGE IS TO BE UTILIZED.
- BEAVERBROOK ROAD AND DURHAM ROAD EAST ARE EXISTING PUBLIC ROADS.
- TOTAL AREA OF SITE: 6.291 AC
- TOTAL NUMBER OF LOTS: 10
- TOTAL AREA OF LOTS: 4.8 AC ±
- TOTAL AREA OF OPEN SPACE: 2.9 AC ±
- TOTAL AREA OF OPEN SPACE: 2.9 AC ±
- AREA OF FLOODPLAIN 5 SWM: 1.4 AC ±
- BOUNDARY SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY HEDDING ASSOCIATES, INC. AND SUPPLIED BY OWNER.
- TOPOGRAPHY SHOWN HEREON IS BASED ON A SURVEY PREPARED BY BOENDER ASSOCIATES, INC.



ONSITE DRAINAGE AREA MAP
 SCALE: 1" = 50'



OFFSITE DA TO I-2
 2.8 AC

OFFSITE DRAINAGE AREA MAP
 SCALE: 1" = 200'

OWNER / DEVELOPER
 WILLIAM A. CASALE
 899A BEAVERBROOK RD.
 COLUMBIA, MARYLAND 21044

SOILS MAP

TITLE		DRAINAGE AREA MAP	
PROJECT		BEAVERBROOK - SECTION II, AREA 3	
LOCATION		5TH ELECTION DISTRICT TAX MAP 30 HOWARD CO. MD.	
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
A5 5/4/74	DK	DF	DK
DATE:	AUGUST, 1985		
FIELD BOOK:	PAGE NO.:	JOB NO.:	DRAWING NO.:
65 / 56	119-54 / 108-18	85173	2 OF 4



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: *William A. Casale* DATE: _____

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: *Walter D. Smith* DATE: 8-25-86

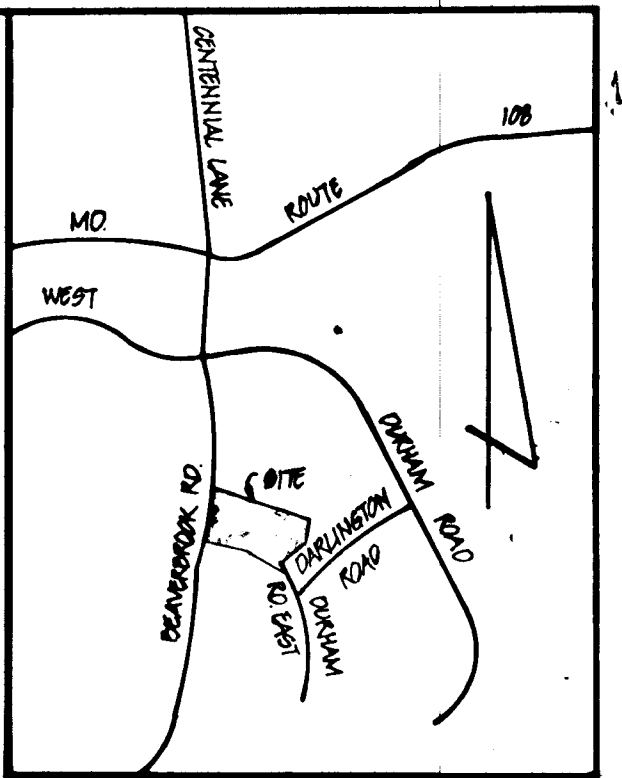
NOTE: FLOODPLAIN CROSS-SECTIONS ARE BASED ON FIELD RUN INFORMATION PREPARED AUGUST 10, 1985 BY BOENDER ASSOCIATES.

NOTE: STORM WATER MANAGEMENT FOR THIS SUBDIVISION IS PREVIOUSLY APPROVED UNDER BEAVERBROOK SEC. 11, AREA 1 & 3 - 184

APPROVED: DEPARTMENT OF PUBLIC WORKS
Charles R. ... 8-28-86
 CHIEF, BUREAU OF ENGINEERING
 APPROVED: OFFICE OF PLANNING & ZONING
Janis ... 8-27-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

BENCHMARKS

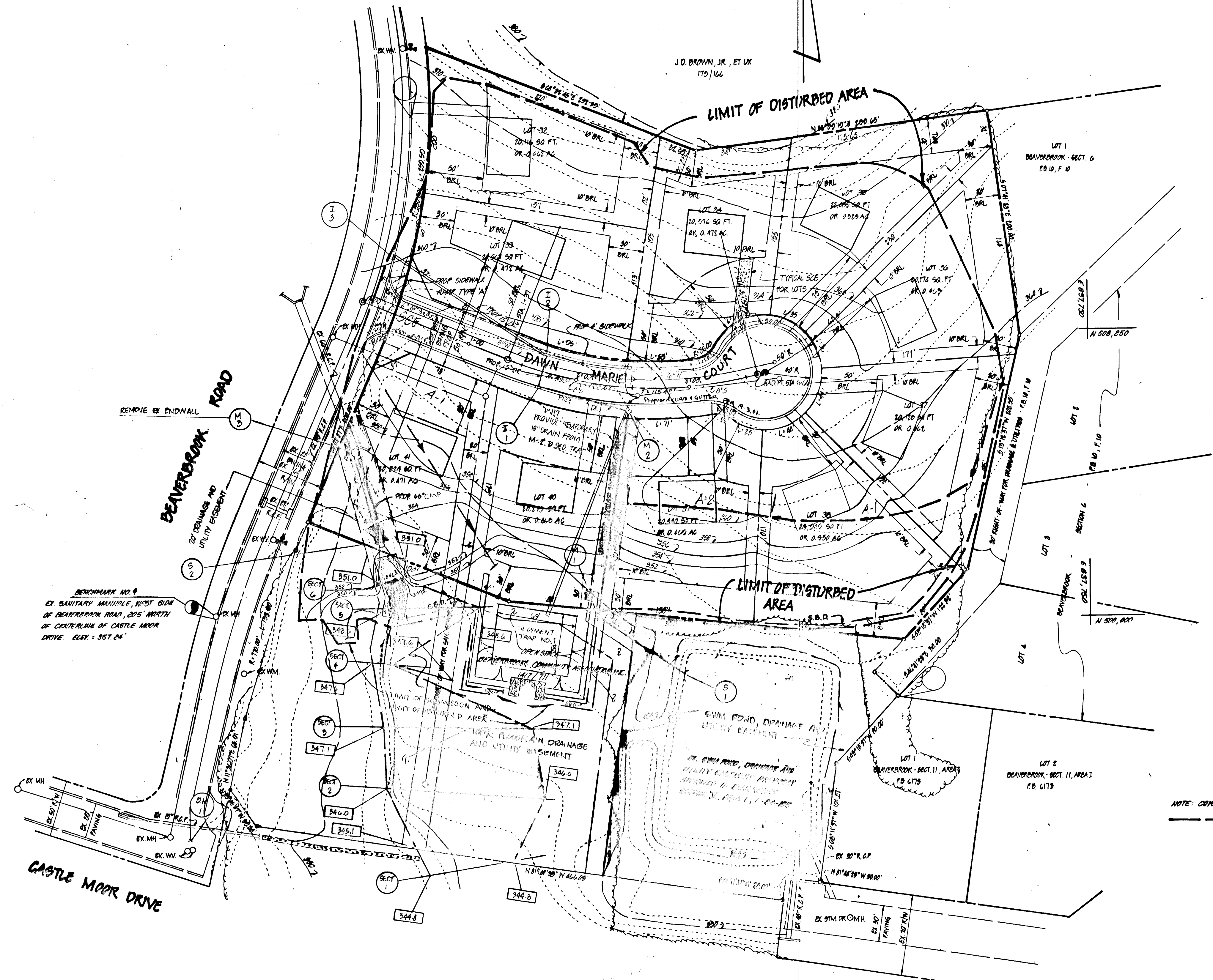
B.M. #1 - PK. NAIL IN EX. PAVING 11' EAST OF SAN. MH.
 EL. 962.46
 B.M. #2 - PK. IN CURB 10' SOUTH OF FIRE HYDRANT
 EL. 966.90
 B.M. #3 - IRON PIPE COR. LOTS 1 AND 2
 EL. 953.21



VICINITY MAP
 SCALE: 1" = 1200'

GENERAL NOTES

- TAX MAP 30, PARCEL 209
- PROPERTY DEED REFERENCE: 856/440
- EX. ZONING: R-50
- PUBLIC WATER AND PUBLIC SEWERAGE IS TO BE UTILIZED.
- BEAVERBROOK ROAD AND DURHAM ROAD EAST ARE EXISTING PUBLIC ROADS.
- TOTAL AREA OF SITE: 5.10 AC. OPEN SPACE REQ'D (2%): 0.3 AC.
- TOTAL NUMBER OF LOTS: 10. OPEN SPACE PROVIDED: 3.10 AC. (PREVIOUSLY TOTAL AREA OF LOTS: 4.8 AC. ±. DEDICATED TO BEAVERBROOK COMMUNITY ASSOCIATION, INC. AREA OF ROAD PLAIN & SWM: 1 AC. ±)
- BOUNDARY SHOWN HEREON IS BASED ON AN ADJACENT SURVEY PREPARED BY HUDKINS ASSOCIATES, INC. AND SUPPLIED BY OWNER.
- TOPOGRAPHY SHOWN HEREON IS BASED ON A SURVEY PREPARED BY BOONDER ASSOCIATES, INC.
- STREET TREES ARE TO BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.191.
- SEEDING CONTROL TO BE PROVIDED ON FINAL CONSTRUCTION PLANS.
- BOUNDARY SHOWN HEREON IS BASED ON MARYLAND STATE PLANE COORDINATE SYSTEM.



RIPRAP OUTLET SEDIMENT TRAP NO. 1

CONTRIBUTING AREA = 5.00 AC.
 REQUIRED VOLUME = 1800 C.F. x 5.00 = 10,000 C.F.
 PROVIDED VOLUME = 68 L. x 54' W x 2.5' DEEP = 10,700 C.F.
 2:1 SIDE SLOPE
 EL. WEIR CREST = 348.2
 EL. TOP OF EMBANKMENT = 351.5
 EL. BOTTOM OF TRAP = 345.2
 DEPTH OF CHANNEL = 1.5'
 LENGTH OF WEIR = 16.0', FLARE TO 24' AT END

NOTE: COVER TO BE PROVIDED AS NECESSARY.

Approved for: *Howard S.C.D.*
 Name: *Howard S.C.D.*
 Date: *8/12/90*
 U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Approved: *Stephen L. Fisher* Date: *8/12/90*
 Howard S.C.D.

OWNER / DEVELOPER
 WILLIAM A. CHASE
 4004 BEAVERBROOK RD.
 COLUMBIA, MARYLAND 21044

APPROVED: DEPARTMENT OF PUBLIC WORKS
William E. Cole 8-22-90
 CHIEF, BUREAU OF ENGINEERING
 DATE: *8-22-90*

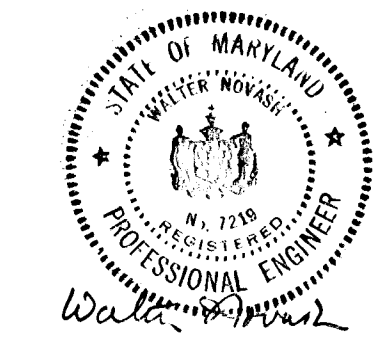
APPROVED: OFFICE OF PLANNING AND ZONING
Louis F. Adams 8-22-90
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 DATE: *8-22-90*

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: _____ DATE: _____

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: *Walter F. Adams* DATE: *8-19-90*



TITLE: GRADING AND SEDIMENT CONTROL PLAN			
PROJECT: BEAVERBROOK - SECTION II, AREA 3			
LOCATION: OPE FILE NO. 8-78-11	TAX MAP 30 HOWARD CO. MD.		
6TH ELECTION DISTRICT	DATE: 8/12/90	CHECKED BY: <i>WFA</i>	DATE: 8/12/90
SCALE: 1" = 60'	DESIGNED BY: <i>WFA</i>	DRAWN BY: <i>WFA</i>	DATE: 8/12/90
FIELD BOOK: _____	PAGE NO.: _____	JOB NO.: 85178	DRAWING NO.: 3 OF 4

boender associates inc.
 consulting engineers
 land surveyors
 land planners

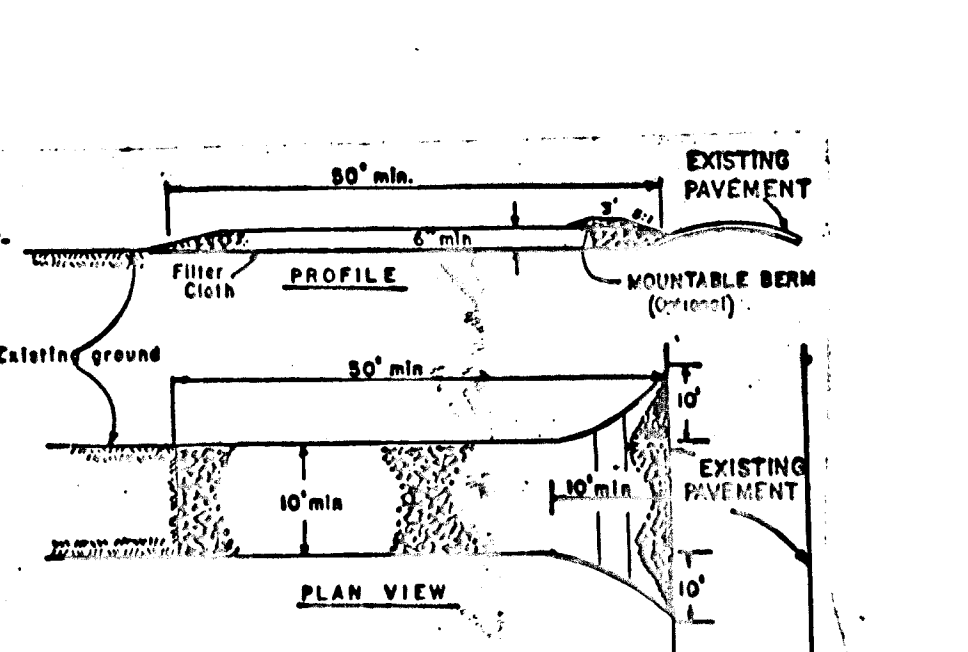
COURTHOUSE SQUARE
 3985 ELLICOTT MILLS DRIVE
 ELLICOTT CITY, MD 21043
 13011 465-7777

- SEDIMENT CONTROL NOTES**
- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437).
 - 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - 3) Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1; b) 14 days as to all other disturbed or graded areas on the project site.
 - 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 32, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
 - 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 53) and (Sec. 54), temporary seedings (Sec. 50) and sodding (Sec. 52). Temporary stabilization with such alone can only be done when recommended seedings do not allow for proper germination and establishment of grass.
 - 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
 - 7) Site Analysis:

Total Area of Site	6.4	Acres
Area Disturbed	1.8	Acres
Area to be road or paved	1.0	Acres
Area to be vegetatively stabilized	1.0	Acres
Total Cut	100	Cu. Yds.
Total Fill	200	Cu. Yds.

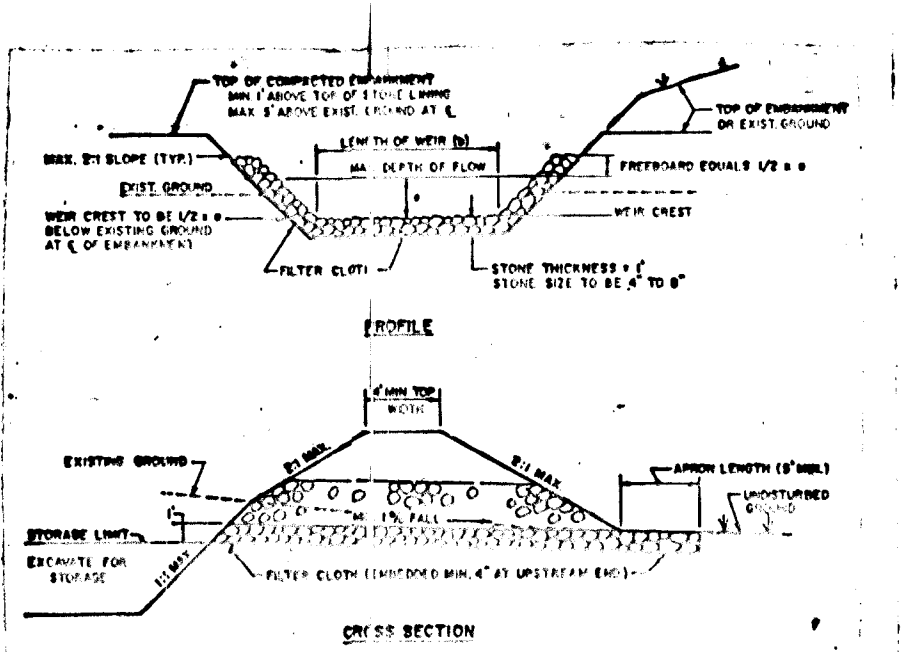
 Offsite waste/borrow area location: _____
 - 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - 9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPM sediment control inspector.
 - 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

- PERMANENT SEEDING NOTES**
- Apply to graded or cleared areas likely to be re-disturbed where a permanent long-lived vegetative cover is needed.
- Seedbed Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.
- 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) and 400 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 100 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 (28 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 80 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 creeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring; Option (2) Use seed. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 1 tons/acre well anchored straw.
- Mulching -** Apply 1/4 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool on 216 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 reseedings.
- Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.**
- Seedbed Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.
- Soil Amendments:** Apply 400 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 75 lbs/acre per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 15, seed with 3 lbs per acre of creeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use seed.
- Mulching -** Apply 1/4 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool on 216 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 rates and methods not covered.



- CONSTRUCTION SPECIFICATIONS**
1. Stone Size - See 2" stone, or reclaimed or recycled concrete equivalent.
 2. Length - As required, but not less than 30 feet (except on a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - Ten (10) foot minimum, but not less than the full width of the driveway where ingress or egress occurs.
 5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
 6. Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mounded berm with 3:1 slope will be preferred.
 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleaning of any sources used to trap sediment. All sediment applied, dropped, washed or tracked onto public right-of-way shall be removed immediately.
 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public right-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.
 9. Periodic inspection and needed maintenance shall be provided after each rain.

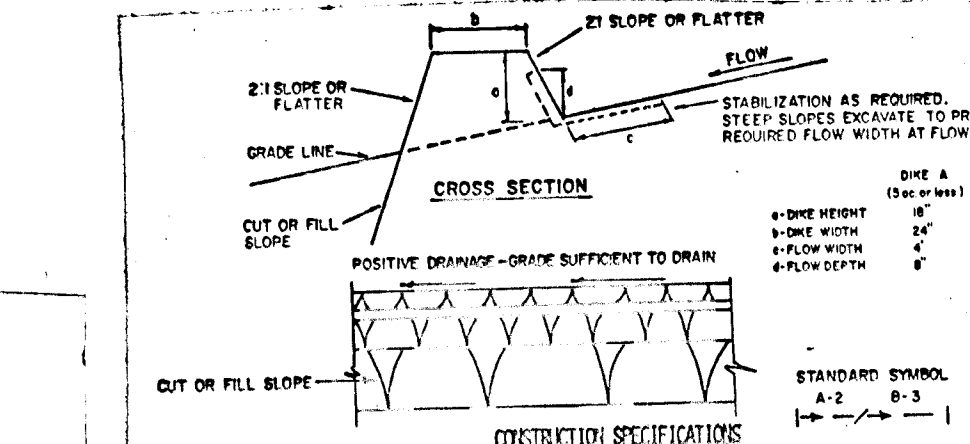
STABILIZED CONSTRUCTION ENTRANCE - S.C.E.
NOT TO SCALE



- CONSTRUCTION SPECIFICATIONS FOR ST-VI**
1. The 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 or other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
 3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
 4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
 5. 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 water crest.
 6. 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.
 7. Stone used in the outlet channel shall be four (4) to eight (8) inches (riprap). 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.
 8. 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.
 9. The structure shall be inspected after each rain and repaired as needed.
 10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
 11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
 12. Drainage area for this practice is limited to 15 acres or less.

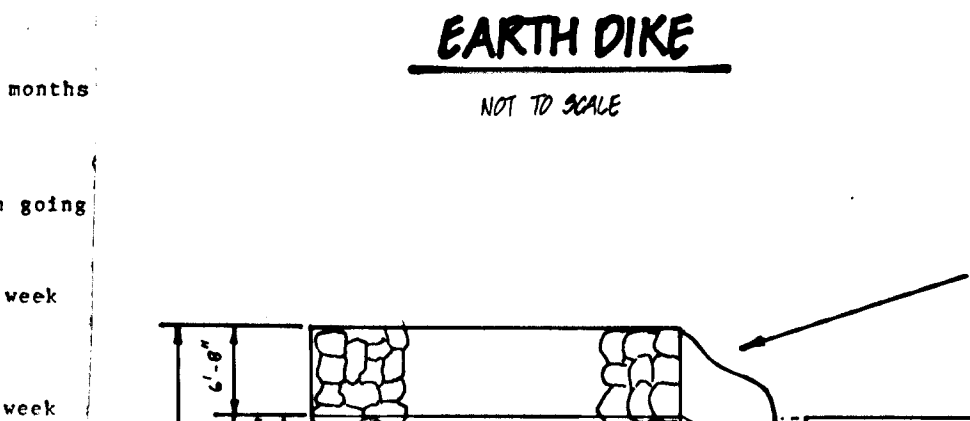
RIPRAP OUTLET SEDIMENT TRAP
NOT TO SCALE

- SEQUENCE OF CONSTRUCTION**
1. Obtain Grading Permit
 2. Notify the Howard County Bureau of Licenses, Inspections and Permits and the Construction Inspections/Permits Division at 792-7272 at least 24 hours prior to beginning grading operations.
 3. Install stabilized construction entrance (S.C.E.) prior to disturbing site. 1 day
 4. Clear and grub for installation of sediment control devices. Install sediment trap No. 1 and the earth dike. 1 week
 5. Grade the road and construct the storm drain system from M-3 to J-2 to M-2. From M-2 provide a temporary 18" drain into sediment trap No. 1 to allow stormwater discharge into the sediment trap. (CONTRACTOR'S CHECK DESIGN SHEET, FIGURE A-2 TO B-2). 2 weeks
 6. Construct the sewer and water mains complete and in place. 2 weeks
 7. Construct the curb and gutter and pave the roads. 1 week
 8. Provide straw bale dikes at lower end of lots 37 through 41. Clear and grub for lots. 1 week
 9. Provide stabilized construction entrances for individual driveways. Grade lots, construct houses, driveways, utility connections, etc. on an individual basis. Install straw bale dikes on lots where directed by the inspector to prevent silt runoff between lots. 6 months
 10. Vegetatively stabilize lots prior to removing sediment control devices. Complete all construction and vegetatively stabilize disturbed areas. on going
 11. Flush out the storm drain systems. Complete the construction of the storm drain system from M-2 to M-1 to S-1. Perform final grading. 1 week
 12. With the grading inspector's approval, remove the sediment trap and other sediment control devices. Stabilize any remaining disturbed areas. 1 week

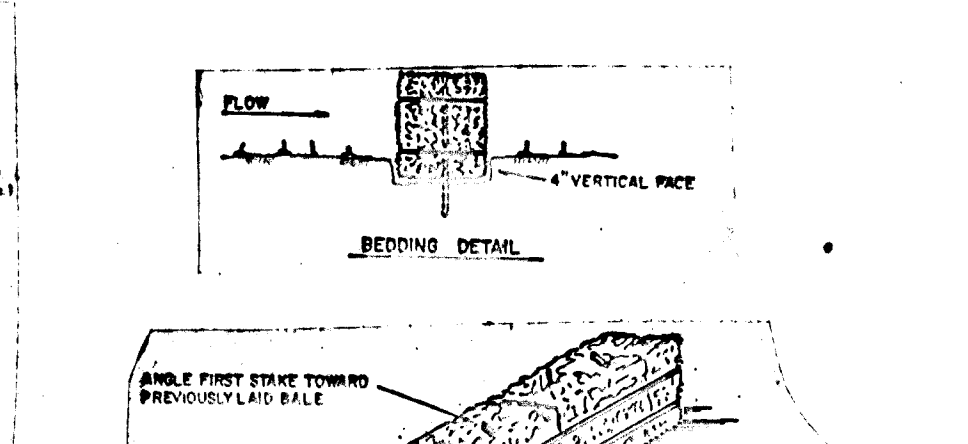


CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE CONSTRUCTED BY EARTHMOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DISTANCE TO AN OUTLET.
3. TO MINIMIZE THE RISK OF EROSION, DIKES FOR B-FLATTERS IF DESIGNED TO FACILITATE CROSSING BY CUSTOMER VEHICLES:
4. DIKES SHALL BE CONSTRUCTED AS NEARLY AS POSSIBLE TO UTILIZE A STABILIZED SAFE OUTLET.
5. DIKES SHALL BE CONSTRUCTED WITH A MINIMUM OF 3' OF SOIL ABOVE THE TOP OF THE DIKE. THE DIKE SHALL BE CONSTRUCTED WITH A MINIMUM OF 3' OF SOIL ABOVE THE TOP OF THE DIKE. THE DIKE SHALL BE CONSTRUCTED WITH A MINIMUM OF 3' OF SOIL ABOVE THE TOP OF THE DIKE.
6. STABILIZATION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND MULCHING. SEE: 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
7. PERIODIC INSPECTION AND REPAIRS MUST BE PROVIDED AFTER EACH RAIN EVENT.

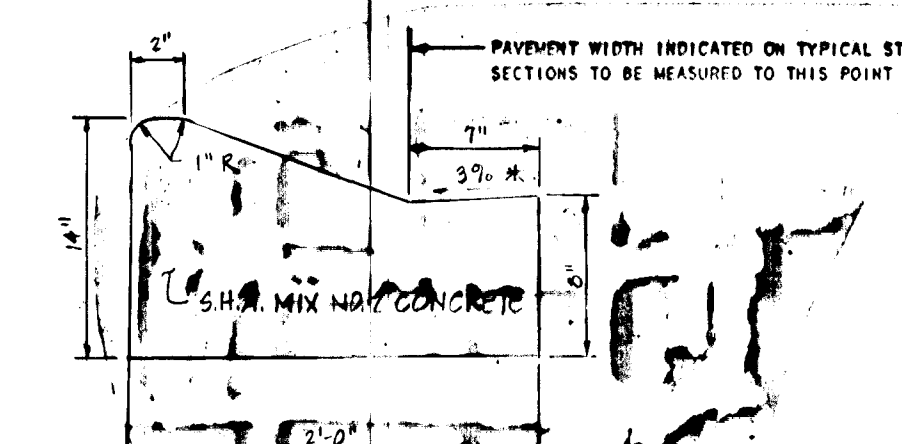


EARTH DIKE
NOT TO SCALE



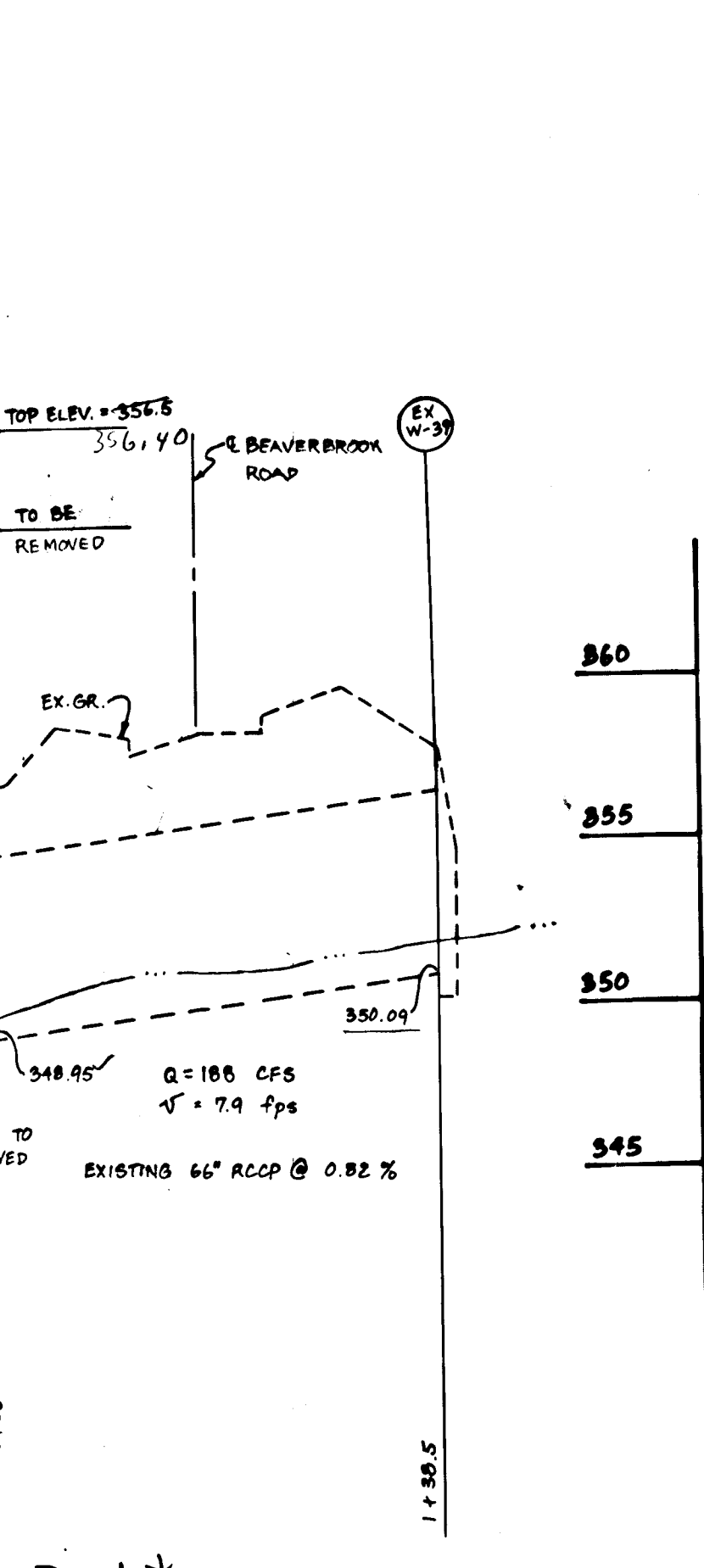
- CONSTRUCTION SPECIFICATIONS**
1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ADJACENT TO EACH OTHER.
 2. EACH BALE SHALL BE SPACED IN THE POIL A MINIMUM OF (6) INCHES AND PLACED SO THE ENDS ARE VERTICAL.
 3. BALES SHALL BE REVERSELY INTERLOCKED IN PLACE BY EITHER TWO STAKES OR REBAR DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH ROW SHALL BE DRIVEN THROUGH THE PREVIOUSLY Laid BALE AT AN ANGLE TO HOLD THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALES.
 4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPERE STORM FLOW OR DRAINAGE.

STRAW BALE DIKE - S.B.D.
NOT TO SCALE



- CONSTRUCTION SPECIFICATIONS**
1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ADJACENT TO EACH OTHER.
 2. EACH BALE SHALL BE SPACED IN THE POIL A MINIMUM OF (6) INCHES AND PLACED SO THE ENDS ARE VERTICAL.
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STRAW BALE DIKE - S.B.D.
NOT TO SCALE



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

AS BUILT SURVEY
CERTIFIED BY
LUTHER E BATHURST
REG. GE
11343
12-17-87

APPROVED: DEPARTMENT OF PUBLIC WORKS
W. C. RAY, Chief, Bureau of Engineering
APPROVED: OFFICE OF PLANNING AND ZONING
L. J. DUNN, Chief, Division of Land Development and Zoning Administration

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.
Walter A. ... DATE: 5-19-86

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.
Walter A. ... DATE: 5-19-86

DP	3-9-87	REVISED CURB AND GUTTER DETAIL
BY	DATE	REVISION
		REVISION BLOCK



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land surveyors
land planners

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COLUMBIA, MARYLAND 21046