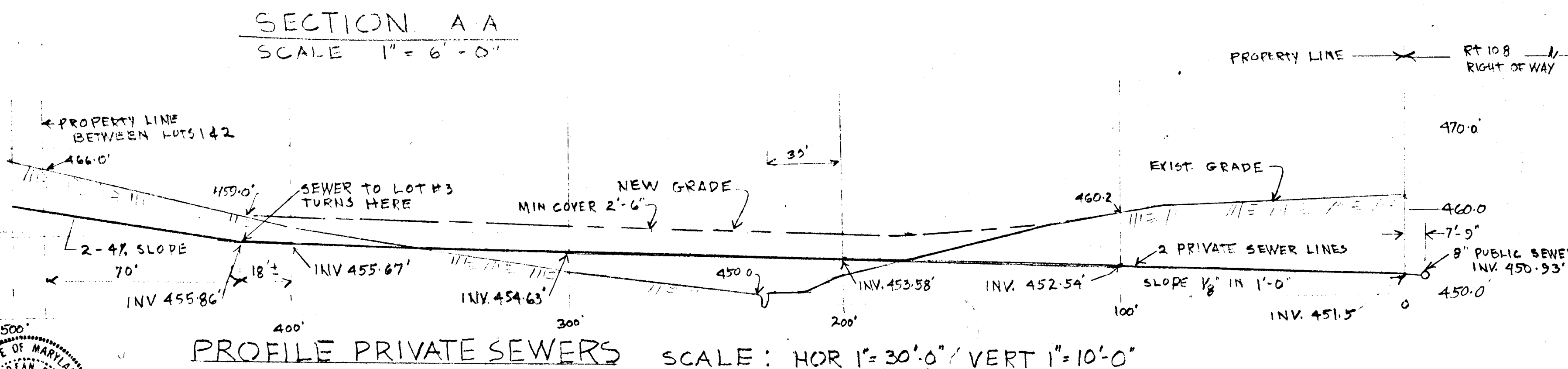
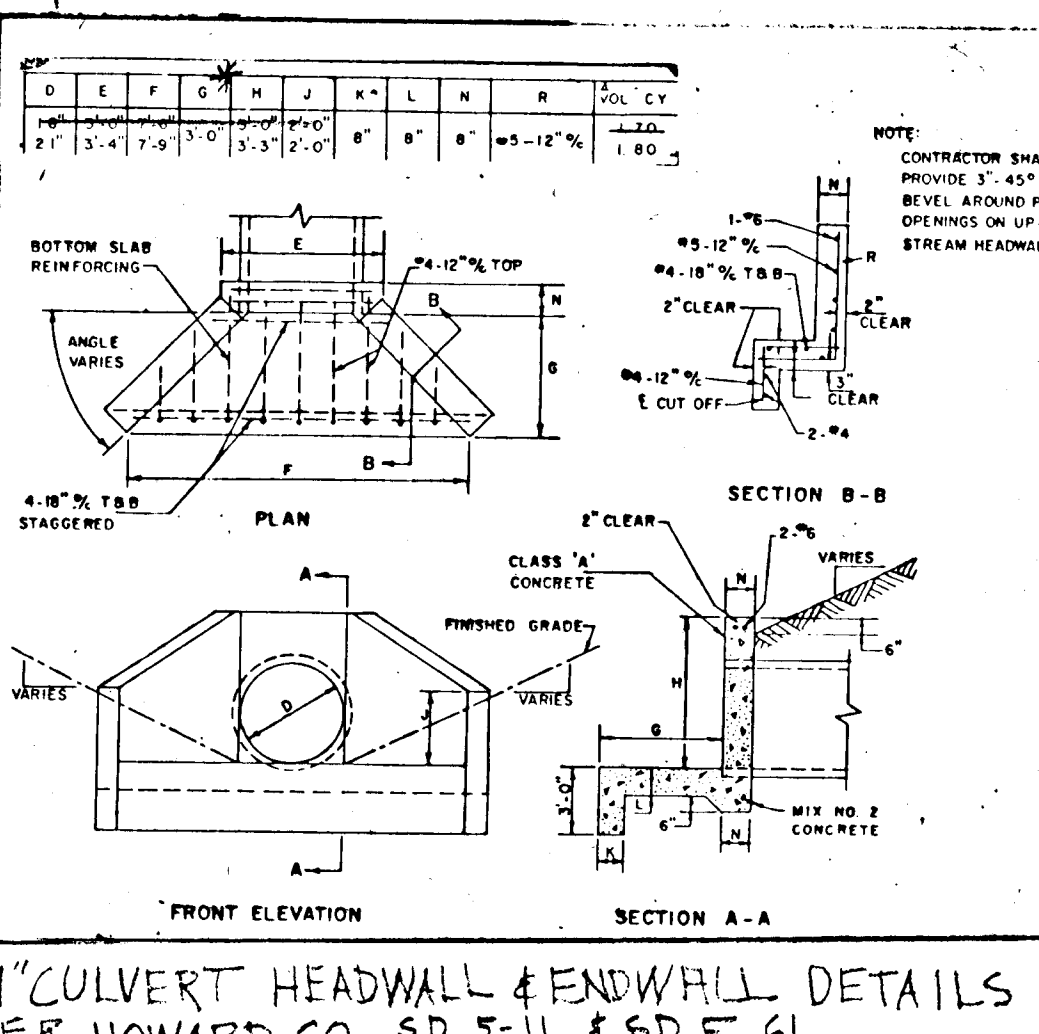
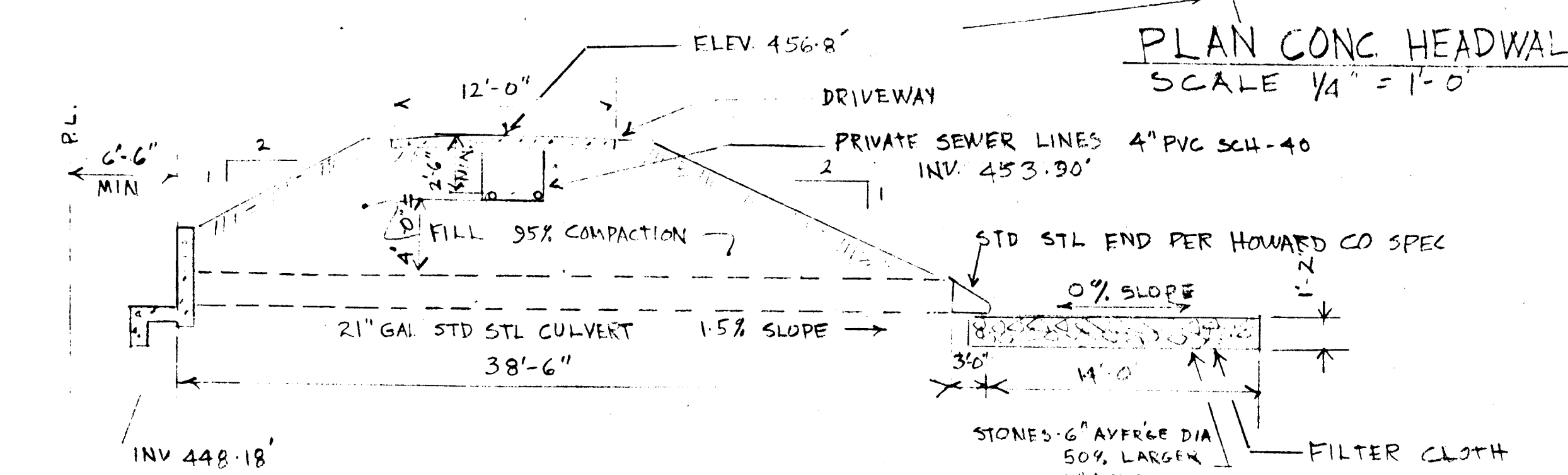
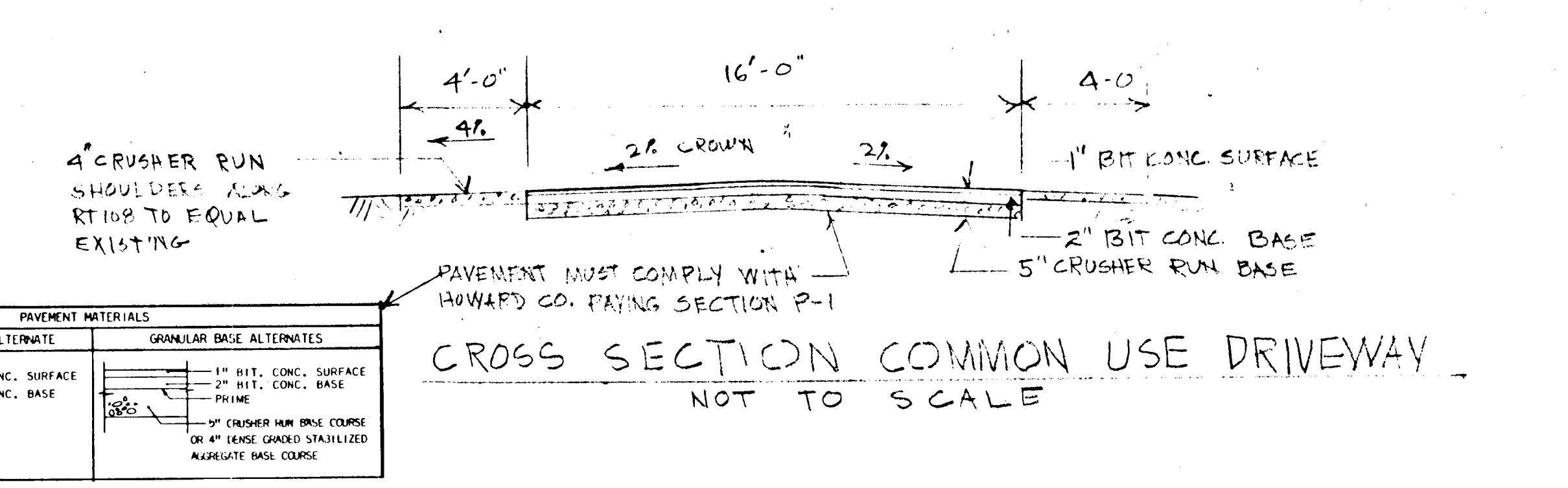


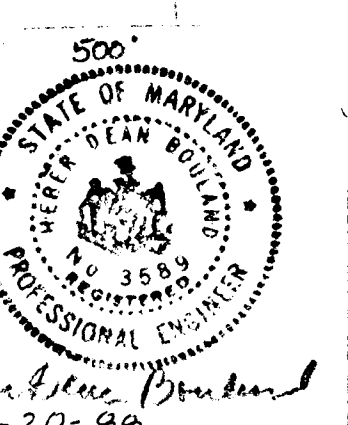
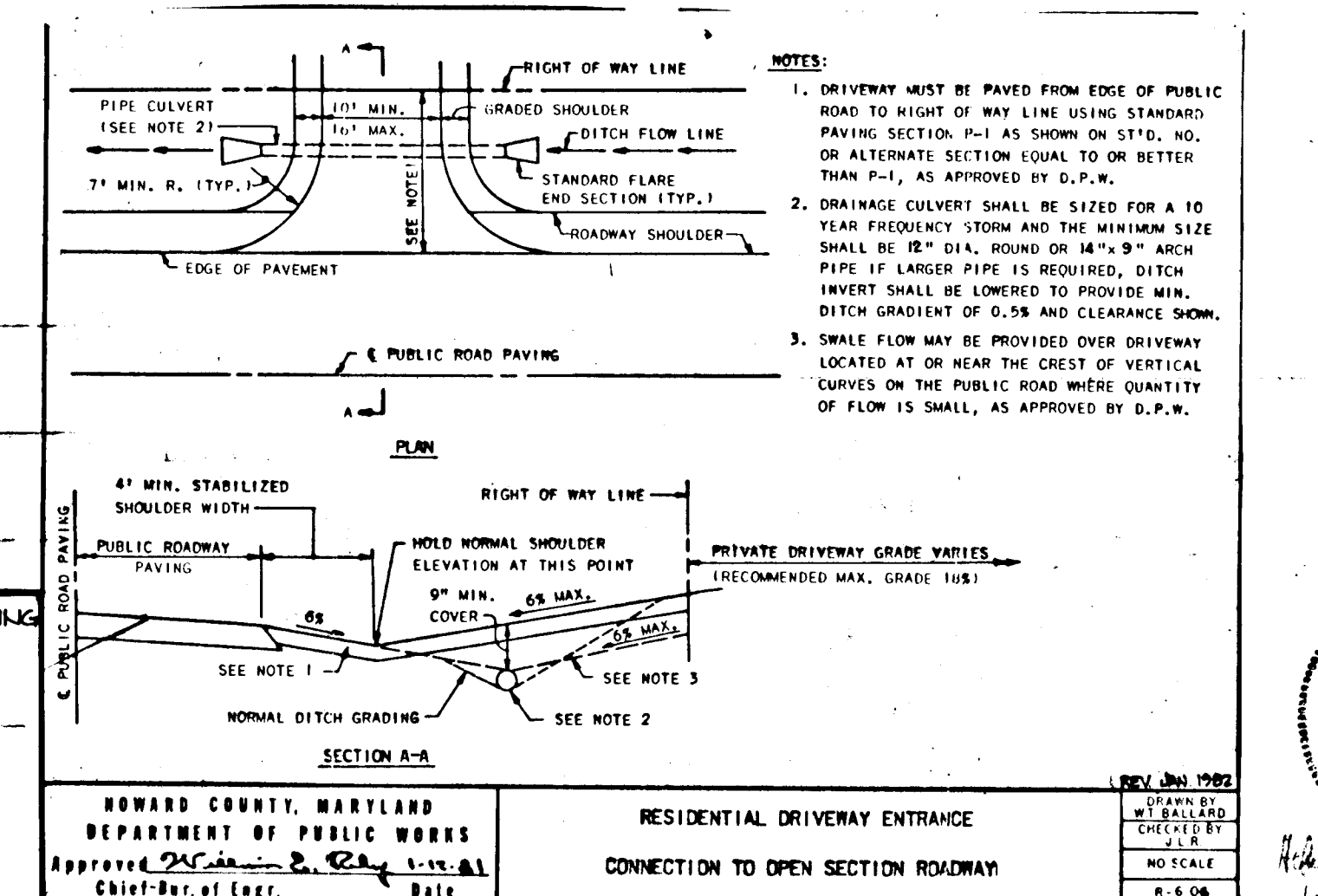
TABLE OF DIMENSIONS

PIPE DIA.	GA.	A	B	H	L	W	APPROX. BODY WEIGHT
18"	18	18.0	18.0	18.0	18.0	18.0	18.0
24"	24	24.0	24.0	24.0	24.0	24.0	24.0
30"	30	30.0	30.0	30.0	30.0	30.0	30.0
36"	36	36.0	36.0	36.0	36.0	36.0	36.0
42"	42	42.0	42.0	42.0	42.0	42.0	42.0
48"	48	48.0	48.0	48.0	48.0	48.0	48.0
54"	54	54.0	54.0	54.0	54.0	54.0	54.0
60"	60	60.0	60.0	60.0	60.0	60.0	60.0
66"	66	66.0	66.0	66.0	66.0	66.0	66.0
72"	72	72.0	72.0	72.0	72.0	72.0	72.0
78"	78	78.0	78.0	78.0	78.0	78.0	78.0
84"	84	84.0	84.0	84.0	84.0	84.0	84.0
90"	90	90.0	90.0	90.0	90.0	90.0	90.0
96"	96	96.0	96.0	96.0	96.0	96.0	96.0
102"	102	102.0	102.0	102.0	102.0	102.0	102.0
108"	108	108.0	108.0	108.0	108.0	108.0	108.0
114"	114	114.0	114.0	114.0	114.0	114.0	114.0
120"	120	120.0	120.0	120.0	120.0	120.0	120.0

NOTES:
 1. ALL 9' PIPE BODIES TO HAVE 12GA. SIDES AND 10GA. CENTER PANELS. WIDTH OF CENTER PANELS TO BE GREATER THAN 20% OF THE PIPE PERIPHERY. MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY 3/8" GALVANIZED RIVETS OR BOLTS.
 2. FOR 42" THRU 60" SIZES REINFORCED EDGES TO BE SUPPLEMENTED WITH GALVANIZED STIFFENER ANGLES. THE ANGLES WILL BE 2 1/2" X 1/4" FOR 42" THRU 48" DIAMETERS AND 3 1/2" X 1/4" FOR 54" THRU 60" DIAMETERS. THE ANGLES TO BE ATTACHED BY 3/8" GALVANIZED NUTS AND BOLTS.
 3. THE PLATE SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF THE PLATE TO BE INCLUDED IN BID PRICE PER EACH OF METAL END SECTION.
 4. TYPE 3 CONNECTION INCLUDES ONE FOOT OF PIPE LENGTH FOR 42" THRU 60" DIAMETER AS A CONNECTOR. THE CONNECTOR SECTION WILL BE ATTACHED TO THE END SECTION BY GALVANIZED RIVETS OR BOLTS.



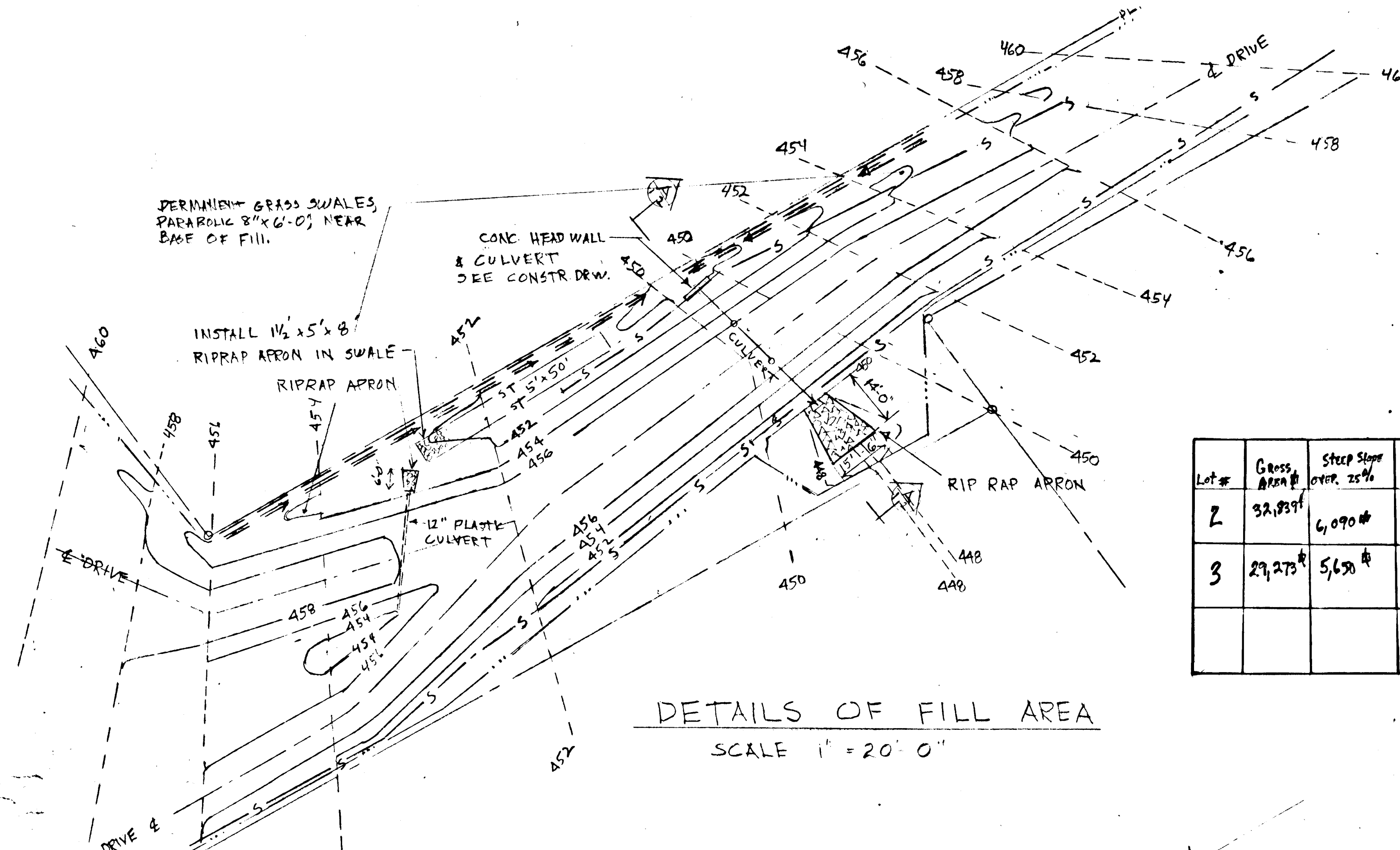
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 3-15-88
 CHIEF, LAND DEVELOPMENT DIVISION DATE
 [Signature] 2/14/88
 CHIEF, BUREAU OF HIGHWAYS DATE
 [Signature] 3-14-88
 CHIEF, BUREAU OF ENGINEERING DATE
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 [Signature] 4/8/88
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



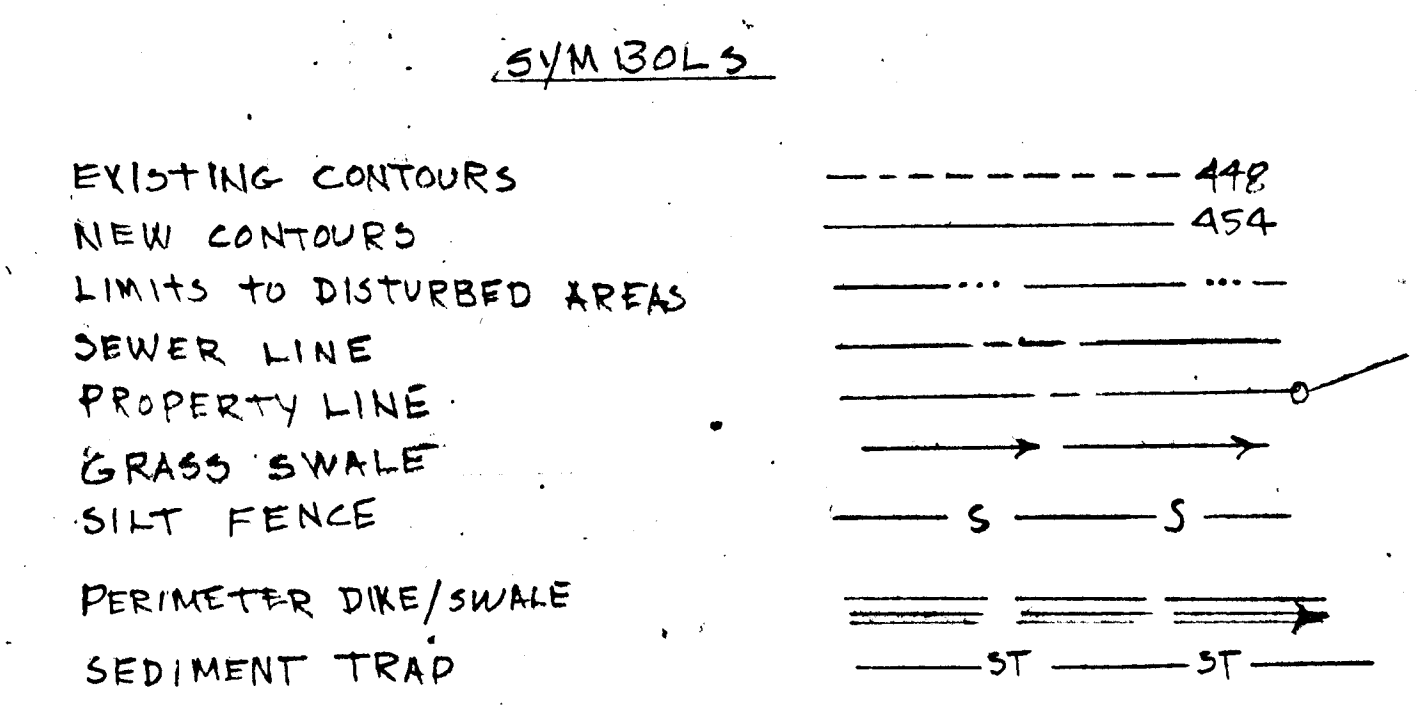
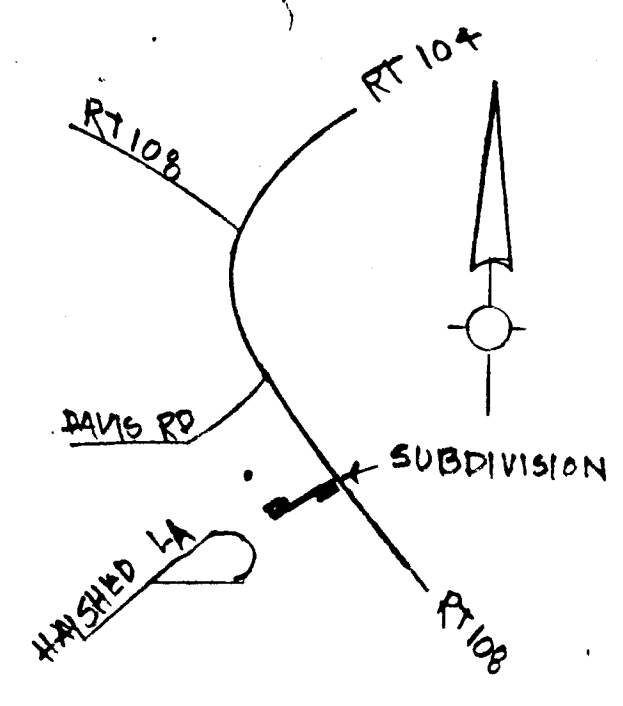
CONSTRUCTION DRAWING DRIVEWAY & CULVERTS
 HEBLA
 HEBER BOULAND & ASSOC. 301 774 6653
 17513 SKYLINE DR. ASHTON, MD 20861

BOULAND SUBDIVISION
 5654 WATERLOO RD COLUMBIA MD 21045
 ELECTION DISTRICT 6 TAX MAP 37, PARCEL 626
 ROBERT & LINDA BOULAND 301 465 1933
 OWNERS, DEVELOPERS
 OCT 28 '87
 SHEET 1 OF 2

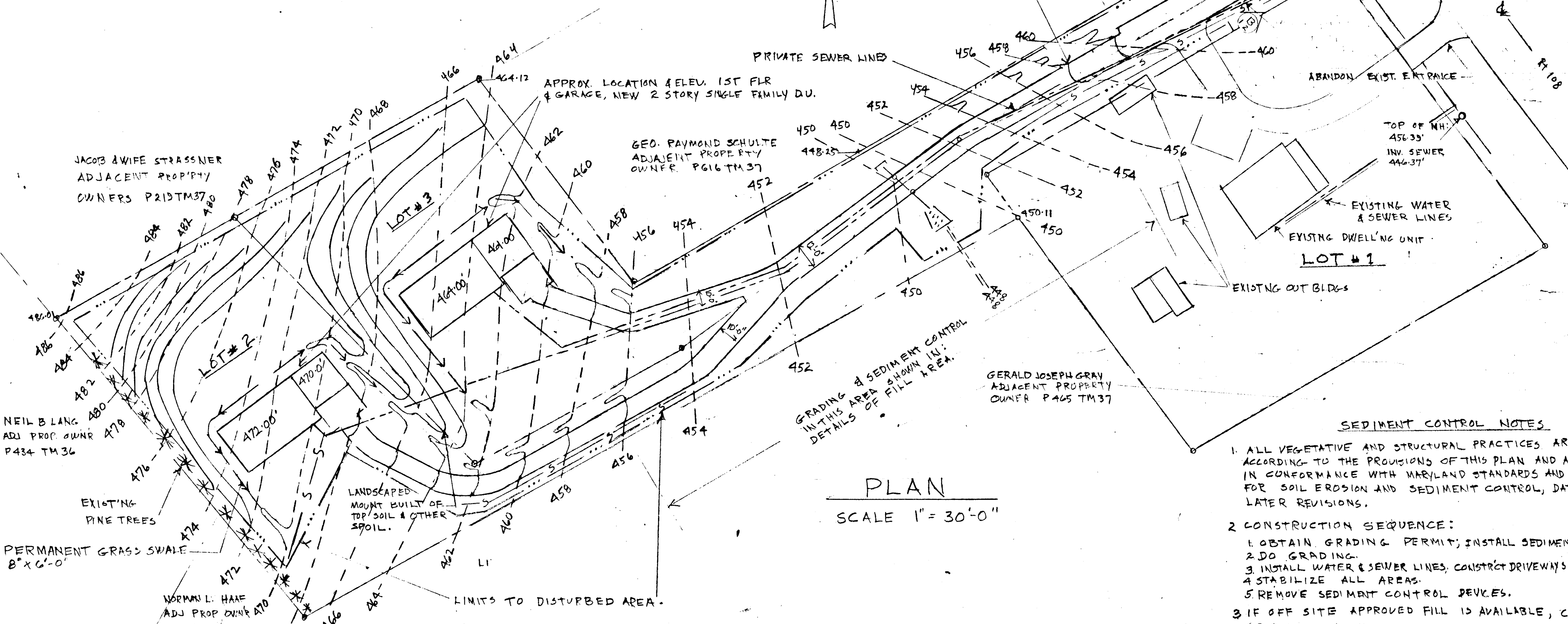
F-88-54



Lot #	Gross Area #	Steep Slope Over 25%	NET AREA
2	32,827	6,090 #	25,710 #
3	27,273 #	5,650 #	23,620



DETAILS OF FILL AREA
SCALE 1" = 20' 0"



- SEDIMENT CONTROL NOTES**
1. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, DATED 1983 OR LATER REVISIONS.
 2. CONSTRUCTION SEQUENCE:
 1. OBTAIN GRADING PERMIT; INSTALL SEDIMENT CONTROL DEVICES.
 2. DO GRADING.
 3. INSTALL WATER & SEWER LINES, CONSTRUCT DRIVEWAYS, BUILD HOUSES
 4. STABILIZE ALL AREAS.
 5. REMOVE SEDIMENT CONTROL DEVICES.
 3. IF OFF SITE APPROVED FILL IS AVAILABLE, CUTS WILL BE LESS THAN SHOWN.
 4. SEE SHEET 2 FOR ADDITIONAL NOTES.

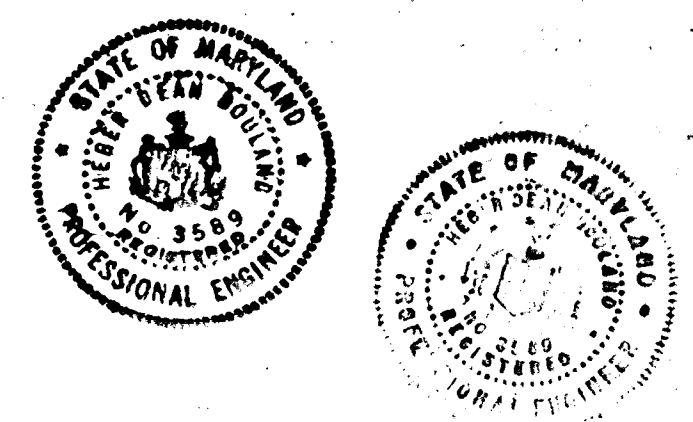
By the Developer:
 "I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
 Signature of Developer: *Robert W. Bouland* Date: *Aug 27, 87*
 Signature of Developer: *Linda M. Bouland*

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."
 Signature of Engineer: *Heber Bouland* Date: *Aug 27, 87*
 Signature of Engineer: *Heber Bouland PE 3589*

Reviewed for HOWARD S.C.D. and meets Technical Requirements
 Signature: *James H. Nelson* Date: *3-7-88*
 U.S. Soil Conservation Service
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 Signature: *Stephen L. Huber* Date: *3/7/88*
 Howard S.C.D.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Signature: *Francis W. Ueland* Date: *3-14-88*
 Chief, Bureau of Highways
 Signature: *James E. Rowe* Date: *3-14-88*
 Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 Signature: *James H. Nelson* Date: *4/8/88*
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT



GRADING PLAN
 SEDIMENT CONTROL
 HEBER BOULAND & ASSOC. 301 774 6653
 17513 SKYLINE DR ASHTON, MD 20861

BOULAND SUBDIVISION
 5654 WATERLOO RD COLUMBIA, MD 21045
 ELECTION DISTRICT 6, TAX MAP 37, PARCEL 626
 ROBERT & LINDA BOULAND, OWNERS, DEVELOPERS 301-465 1933

AUG 21, '87
 SHEET
 2 OF 2