

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER: [Signature] DATE: 7-15-89  
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 DIRECTOR: [Signature] DATE: 8/17/89  
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE: 2/22/89  
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR: [Signature] DATE: 7/15/89  
 CHIEF BUREAU OF ENGINEERING DATE: 7-15-89

# APARTMENT COMPLEX BOWLING BROOK FARMS PARCEL M

### SITE TABULATION

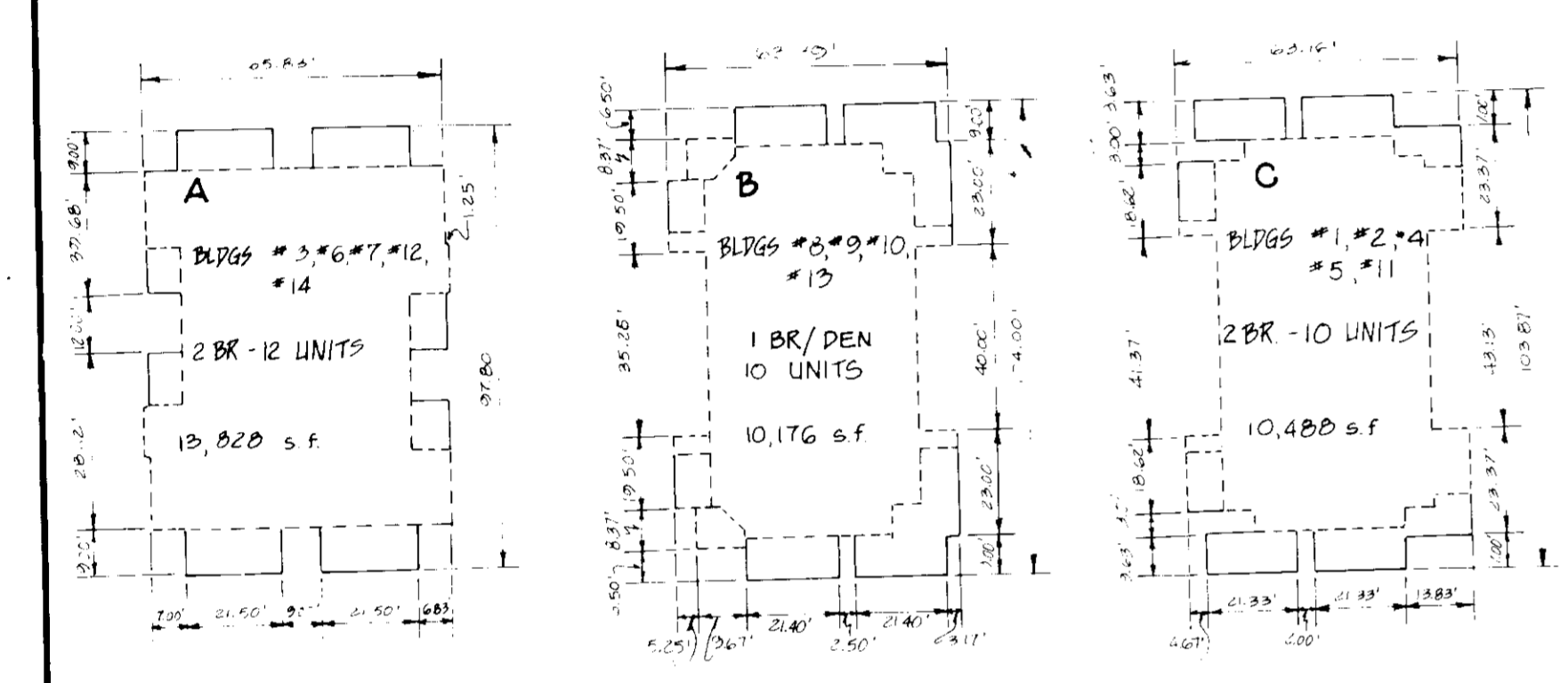
EXISTING ZONING	RES-B
TOTAL NUMBER OF PARCEL	12.76 AC.
TOTAL AREA OF PARCEL	12.76 AC.
PROPOSED USE	GARDEN APARTMENTS
NUMBER OF BUILDINGS	12
TOTAL NUMBER OF APARTMENT UNITS (ALLOWED)	150
TOTAL NUMBER OF APARTMENT UNITS (PROPOSED)	150
NUMBER OF HANDICAP UNITS	6

- GENERAL NOTES
- THE APPROXIMATE LOCATION OF ALL UTILITIES IS SHOWN BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL LOCATE, PROTECT AND SUPPORT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER/INSPECTOR AT THE CONTRACTOR'S EXPENSE.
  - CONTRACTOR SHALL LOCATE EXISTING UTILITIES TO A DEPTH OF TWO (2) FEET. A RECORD OF CONSTRUCTION INTERFERENCES IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILILITY AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK ON THESE PLANS:
    - STATE HIGHWAY ADMINISTRATION - 531-5553
    - BALTIMORE GAS & ELECTRIC COMPANY - 541-2966
    - BALTIMORE GAS & ELECTRIC COMPANY - 234-6311
    - BALTIMORE GAS & ELECTRIC COMPANY - 268-9321
    - BALTIMORE GAS & ELECTRIC COMPANY - 268-9321
    - CHESAPEAKE & POTOMAC (CAP) TELEPHONE COMPANY - 25-9976
    - BUREAU OF UTILITIES/HOWARD COUNTY - 992-7444

### STRUCTURE SCHEDULE

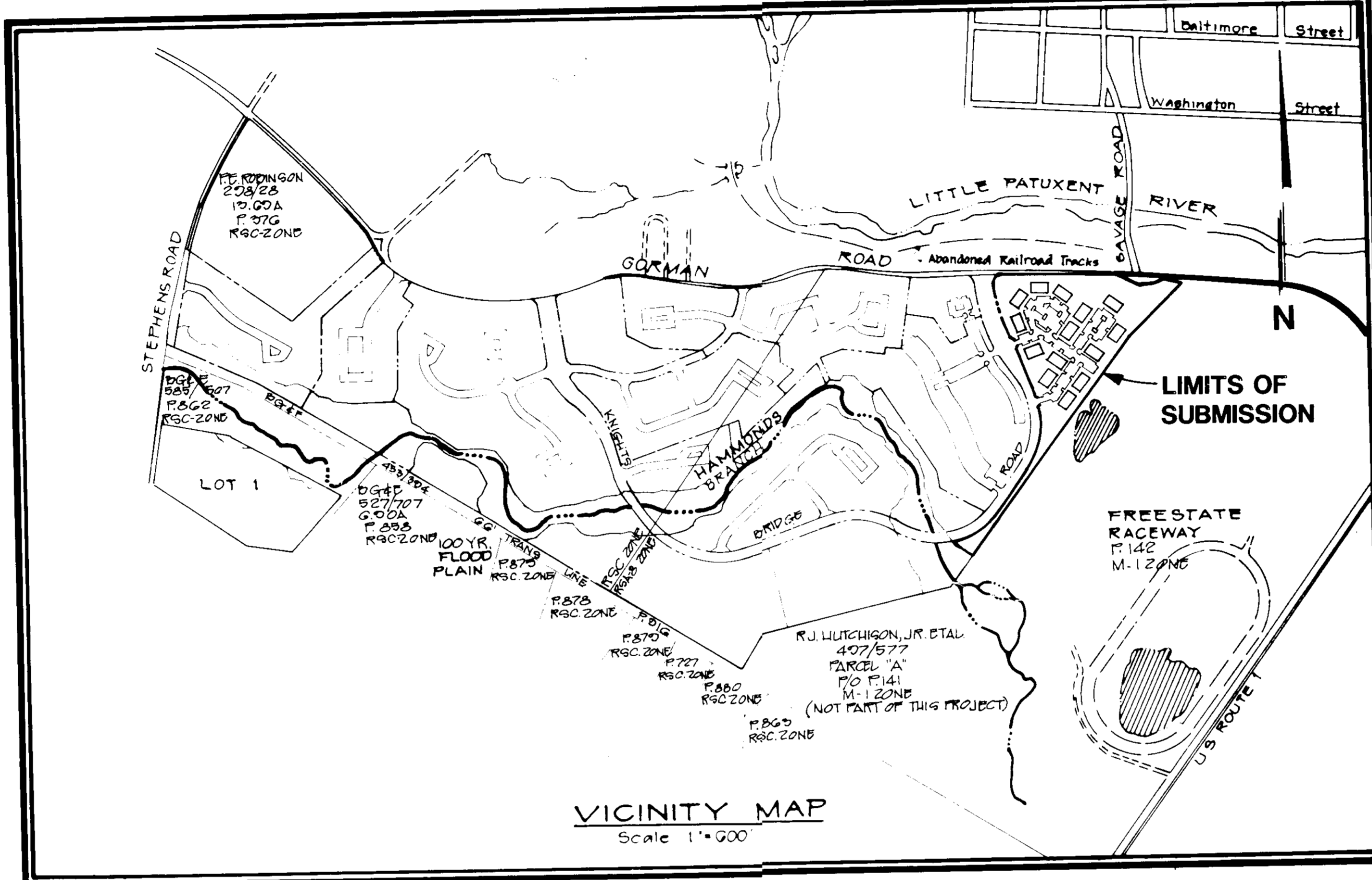
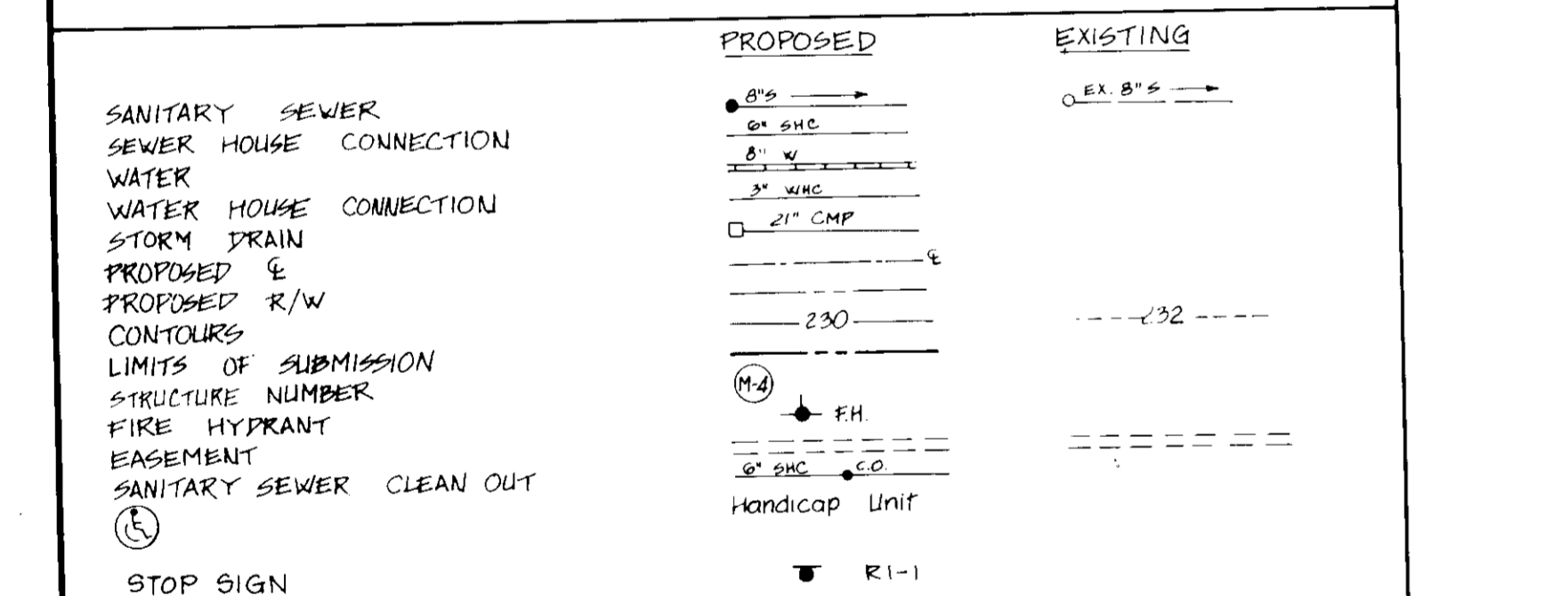
NO	TYPE	INV.IN	INV.OUT	UPPER END	LOWER END	HO.CO. STD.	LOCATION
I-1	A-10 INLET	202.93	206.71	206.20	5D-4.02	4+76, 14' RT	
I-2	A-10 INLET	202.30	201.55	207.40	5D-4.02	4+215, 14' LT	
I-3	A-10 INLET	204.75	208.40	208.30	5D-4.02	5+225, 14' RT	
I-4	WATER QUALITY INLET	194.42	195.58	205.50	5D-4.02	3+880, 12' LT	
I-5	WATER QUALITY INLET	194.42	195.58	205.50	WG1/50 4.02	3+66, 30' LT	
I-6	WATER QUALITY INLET	194.42	195.58	205.50	WG1/50 4.02	6+91.99, 18' LT	
M-1	MANHOLE	200.01	208.30	208.30	G-5.11	SEE PLAN	
M-2	MANHOLE	194.89	202.30	202.30	G-5.11	SEE PLAN	
M-3	MANHOLE	194.96	194.21	196.50	G-5.11	SEE PLAN	
Y-1	YARD INLET	209.00	209.00	209.00	5D-4.14	SEE PLAN	
E-2	END SECTION	21' 194.03 0.85%	194.00		5D-5.61	SEE PLAN	
E-3	END SECTION	21' 201.17 0.68%	201.15		5D-5.61	SEE PLAN	

### TYPICAL UNITS



NOTE: UNIT ELEVATIONS ARE SHOWN ON SHEET B - NOT TO SCALE -

### LEGEND



### DENSITY TABULATIONS

SECTION	SECTION 1	SECTION 2	SECTION 3	SECTION 4	TOTAL
AREA	2.76	2.76	4.90	4.34	14.76
NO. OF DWELLING UNITS	10	10	20	10	50
NO. OF APARTMENT UNITS	10	10	20	10	50
DENSITY PER ACRE	3.62	3.62	4.08	2.30	3.41

### SQUARE FOOT LIVING AREA

Building	Unit Type	No. of Units	No. of Bedrooms	Required floor space per Section 101.2.2.2	Floor space provided (per unit)
1	C 10u	2 Br	2	660 sq ft	1049 sq ft
2	C 10u	2 Br	2	660 sq ft	1049 sq ft
3	A 12u	2 Br	2	660 sq ft	1152 sq ft
4	C 10u	2 Br	2	660 sq ft	1049 sq ft
5	A 12u	2 Br	2	660 sq ft	1152 sq ft
6	A 12u	2 Br	2	660 sq ft	1152 sq ft
7	A 12u	2 Br	2	660 sq ft	1152 sq ft
8	B 10u	1 Br/Den	1	530 sq ft	1018 sq ft
9	B 10u	1 Br/Den	1	530 sq ft	1018 sq ft
10	B 10u	1 Br/Den	1	530 sq ft	1018 sq ft
11	C 10u	2 Br	2	660 sq ft	1049 sq ft
12	A 12u	2 Br	2	660 sq ft	1152 sq ft
13	B 10u	1 Br/Den	1	530 sq ft	1018 sq ft
14	A 12u	2 Br	2	660 sq ft	1152 sq ft

## SITE DEVELOPMENT PLANS

# HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL MEASURE FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 OF THE STANDARD SPECIFICATIONS

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT  
 SIGNATURE: [Signature] DATE: 6/26/89

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.  
 APPROVED: [Signature] DATE: [Date]

### PIPE SCHEDULE

DIA.	MATERIAL	CLASS	LENGTH (FT)
15"	CMP		181'
18"	CMP		173'
21"	CMP		198'
24"	CMP		191'
27"	CMP		214'
8" S	D.I.P.		50'
8" S	PVC		954'
6" S	PVC		914'
3" S	PVC		1,223'
6" S	P.I.P.		229'

OWNER/DEVELOPER  
 GORMAN ROAD LIMITED PARTNERSHIP  
 C/O JAMES F. KNOTT DEVELOPMENT CORPORATION  
 110 WEST ROAD, SUITE 203  
 TOWSON MARYLAND 21204  
 (801) 321-6436

### INDEX TO DRAWINGS

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2	0105 THAMESMEADE	2.	SITE DEVELOPMENT PLAN
3	0115 THAMESMEADE	3.	SITE DEVELOPMENT PLAN
4	0125 THAMESMEADE	4.	ROAD AND SEWER PROFILES
5	0135 THAMESMEADE	5.	STORM DRAIN PROFILES
6	0035 THAMESMEADE	6.	WATER QUALITY INLET DETAIL SHEET
7	0045 THAMESMEADE	7.	DETAIL SHEET
8	0035 THAMESMEADE	8.	DETAIL SHEET
9	0025 THAMESMEADE	9.	LANDSCAPE PLAN
10	0015 THAMESMEADE	10.	LANDSCAPE PLAN AND PLANTING DETAILS
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13	0075 THAMESMEADE	13.	EROSION AND SEDIMENT CONTROL PLAN
14	0085 THAMESMEADE	14.	EROSION AND SEDIMENT CONTROL PLAN
		15.	DRAINAGE AREA MAP
		16.	DRAINAGE AREA MAP

OPZ FILE NOS.: S-89-10, VP-85-78, VP-85-78A-2, S-89-57, P-87-12, P-87-10, PB-198, F-89-43, WP-89-12.

SUBDIVISION NAME	SECTION AREA	LOT/PARCEL #
BOWLING BROOK FARMS	47	PARCEL M
PLAT # OR L/F	BLOCK #	TAX/ZONE MAP
8283-8284	16	RSAB
WATER CODE	SEWER CODE	CENSUS TR
CO3	5090000	6003

NO.	DESCRIPTION	DATE	APPROVED	DATE
1	ISSUED TO HOWARD COUNTY	2-28-89		
2	ISSUED TO HO.CO. FOR 2ND REVIEW	4-17-89		
3	ISSUED TO HO.CO. FOR SIGNATURE	6/20/89		
4	REVIEWED FOR LAND DIVISION COMMENTS	10-20-89		
5	AS-BUILT REVISIONS	5-7-91		

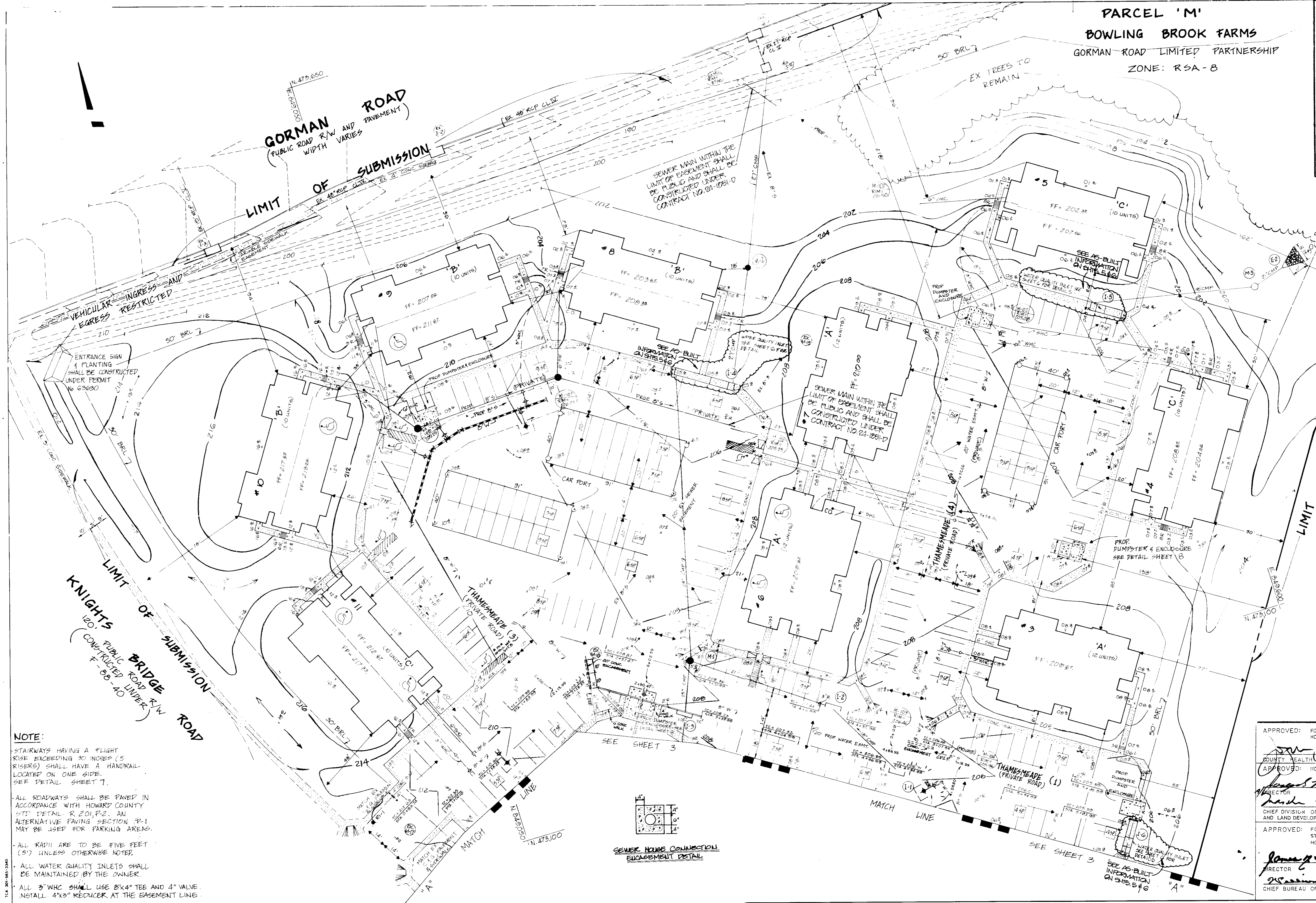
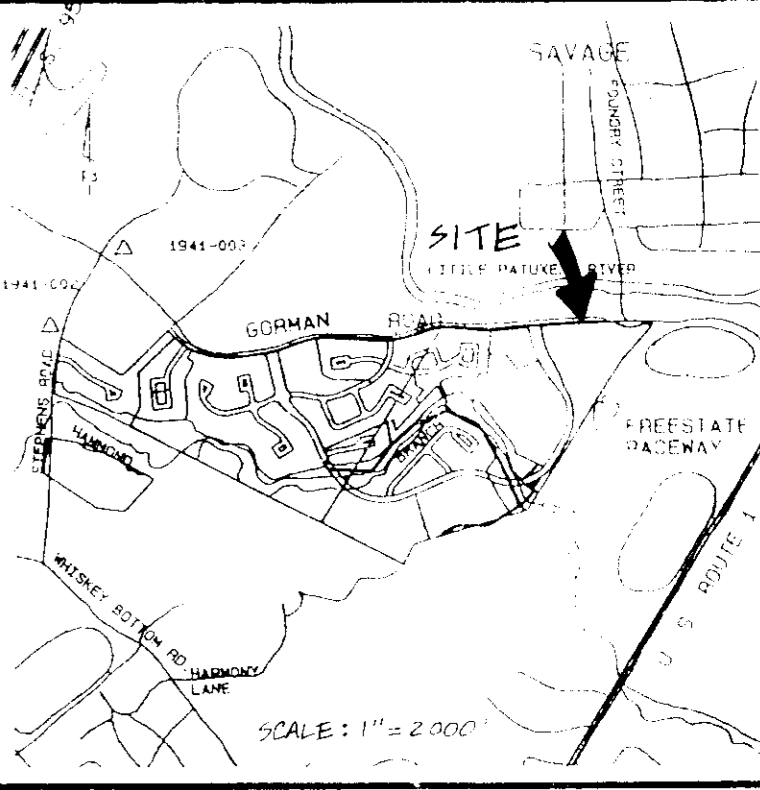
REVISION APPROVED BY: [Signature] PROFESSIONAL SEAL

### TITLE SHEET

Patton Harris Rust and Associates  
 A Professional Corporation  
 Engineers, Surveyors, Planners and Landscape Architects  
 7609 Standish Place Rockville, Maryland 20855 (301)762-2220

**BOWLING BROOK FARMS**  
**PARCEL M - APARTMENTS**  
 A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
 SIXTH ELECTION DISTRICT  
 TAX MAP 47 PARCEL 141  
 L.1394 F.632  
 SURVEY PLAN #4 DATE 2-28-89  
 DESIGN MJK SHEET 1 OF 16  
 CHECKED FILE NO. 2164-1-12  
 SCALE AS NOTED  
 AS-BUILT

**PARCEL 'M'**  
**BOWLING BROOK FARMS**  
 GORMAN ROAD LIMITED PARTNERSHIP  
 ZONE: RSA-8



**FREESTATE RACING ASSOCIATION**  
 1023/347  
 ZONE: M-1

6-9-89  
 LKS

HOWARD COUNTY APPROVAL

**NOTE:**  
 STAIRWAYS HAVING A FLIGHT RISE EXCEEDING 30 INCHES (5 RISERS) SHALL HAVE A HANDRAIL LOCATED ON ONE SIDE. SEE DETAIL SHEET 7.  
 ALL ROADWAYS SHALL BE PAVED IN ACCORDANCE WITH HOWARD COUNTY STD DETAIL R 201.P.2. AN ALTERNATIVE PAVING SECTION 9-1 MAY BE USED FOR PARKING AREAS.  
 ALL RADII ARE TO BE FIVE FEET (5') UNLESS OTHERWISE NOTED.  
 ALL WATER QUALITY INLETS SHALL BE MAINTAINED BY THE OWNER.  
 ALL 3" W/C SHALL USE 8"x4" TEE AND 4" VALVE. INSTALL 4"x3" REDUCER AT THE EASEMENT LINE.

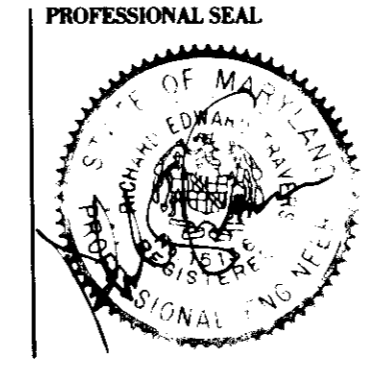
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT	<i>[Signature]</i>	7-19-89	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING	<i>[Signature]</i>	8/12/89	DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	<i>[Signature]</i>	7/23/89	DATE
APPROVED: CHIEF BUREAU OF ENGINEERING	<i>[Signature]</i>	7-3-89	DATE



**CLIENT**  
**OWNER/DEVELOPER**  
 GORMAN ROAD LIMITED PARTNERSHIP  
 C/O JAMES F. KNOTT DEVELOPMENT CORPORATION  
 110 WEST ROAD, SUITE 203  
 TORSON, MARYLAND 21204  
 (301) 321-6436

**JOB**  
**BOWLING BROOK FARMS**  
**PARCEL M - APARTMENTS**  
 A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
 SIXTH ELECTION DISTRICT  
 TAX MAP 47 PARCEL 141  
 L.1394 F.632

**TITLE**  
**SITE DEVELOPMENT PLAN**



NO.	REVISIONS	DATE	BY	SURVEY BY	FILE NO.
1	ISSUED TO HOWARD COUNTY	2-28-89			2184-1-13
2	ISSUED TO HO. CO. FOR 2ND REVIEW	4-17-89			DATE 2-28-89
3	ISSUED TO HO. CO. FOR SIGNATURE	6/20/89			SCALE 1" = 30' 2"
4	REVISED PER LAND DEV. DIVISION COMMENTS	10/13/89			SHEET 2 OF 16
5	AS-BUILT REVISIONS	5/7/91			

DESIGN: M.J.K.  
 DRAWN: E.R.  
 CHECK: [Signature]

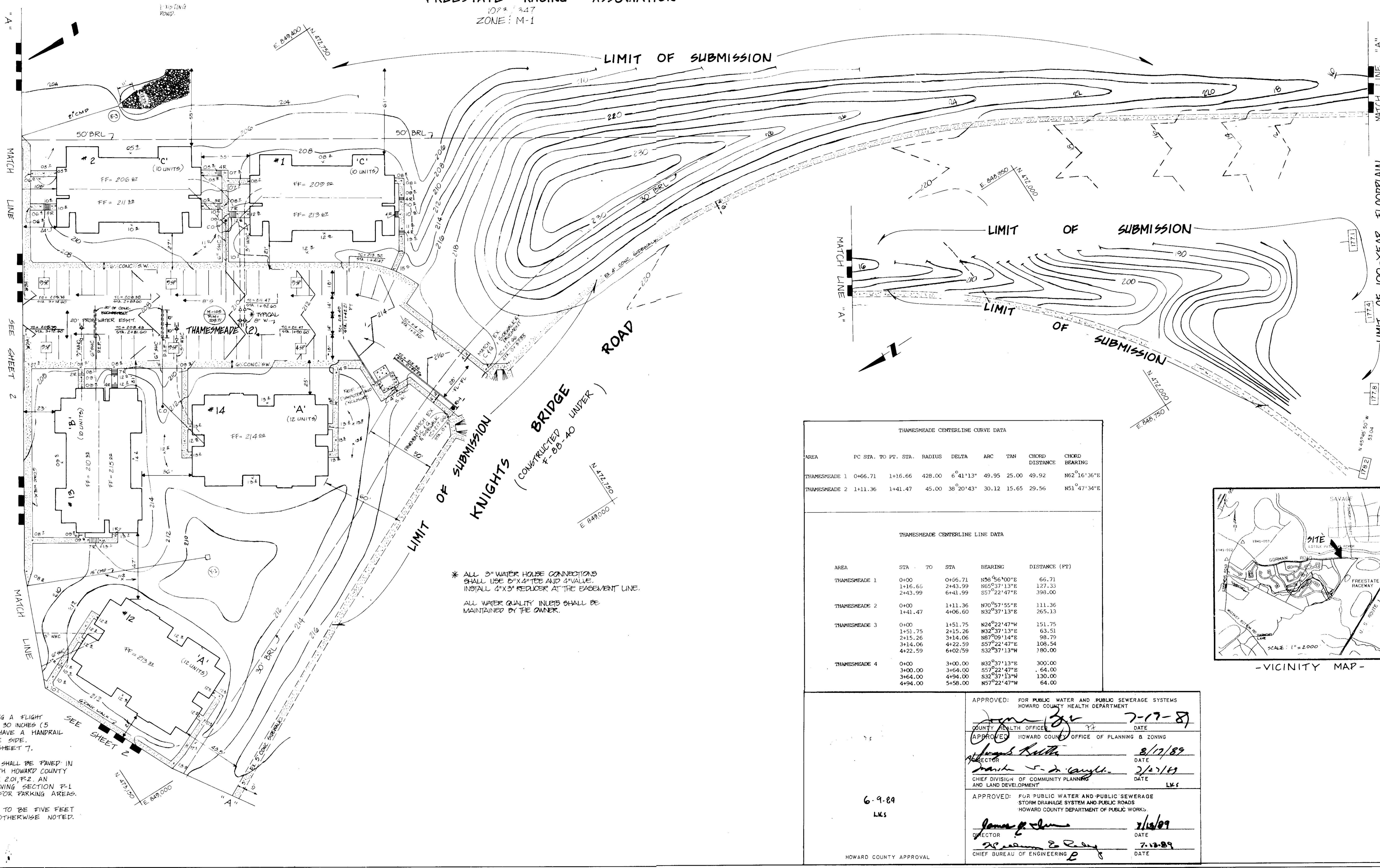
Patton Harris Root & Associates, Inc.  
 Engineers, Surveyors, Planners, Landscape Architects  
 7609 Sandhills Place  
 Rockville, Maryland 20855  
 301.762.2220

Office:  
 Fairfax, VA  
 Bridgewater, VA  
 Leesburg, VA  
 Rockville, MD  
 Virginia Beach, VA

SDP-89-170

FREESTATE RACING ASSOCIATION

1072 1347  
ZONE: M-1



\* ALL 3" WATER HOUSE CONNECTIONS SHALL USE 2" X 4" TEE AND 4" VALVE. INSTALL 4" X 3" REDUCER AT THE EASEMENT LINE.  
ALL WATER QUALITY INLETS SHALL BE MAINTAINED BY THE OWNER.

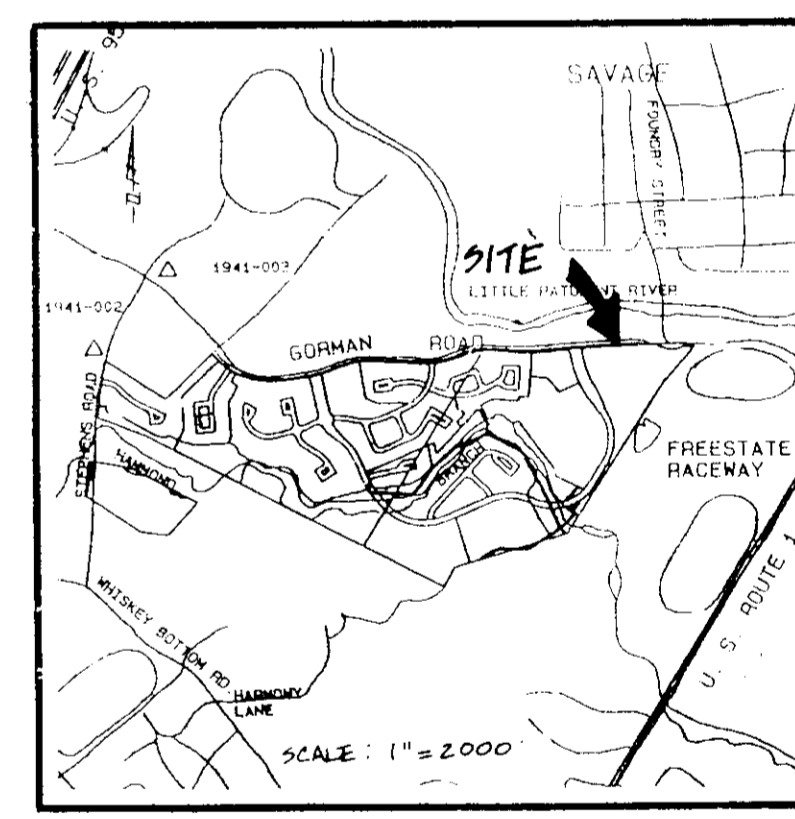
THAMESMEADE CENTERLINE CURVE DATA

AREA	PC STA.	TO PT. STA.	RADIUS	DELTA	ARC TAN	CHORD DISTANCE	CHORD BEARING
THAMESMEADE 1	0+66.71	1+16.66	428.00	6°41'13"	49.95	25.00	49.92 N62°16'36"E
THAMESMEADE 2	1+11.36	1+41.47	45.00	38°20'43"	30.12	15.65	29.56 N51°47'34"E

THAMESMEADE CENTERLINE LINE DATA

AREA	STA.	TO STA.	BEARING	DISTANCE (FT)
THAMESMEADE 1	0+00	0+66.71	N38°56'00"E	66.71
	1+16.66	2+43.99	N65°37'13"E	127.33
	2+43.99	6+41.99	S57°22'47"E	398.00
THAMESMEADE 2	0+00	1+11.36	N70°37'55"E	111.36
	1+41.47	4+06.60	N32°37'13"E	265.13
THAMESMEADE 3	0+00	1+51.75	N24°22'47"W	151.75
	1+51.75	2+15.26	N32°37'13"E	63.51
	2+15.26	3+14.06	N87°09'14"E	98.79
	3+14.06	4+22.59	S37°22'47"E	108.54
THAMESMEADE 4	0+00	3+00.00	N32°37'13"E	300.00
	3+00.00	3+64.00	S57°22'47"E	64.00
	3+64.00	4+94.00	S32°37'13"W	130.00
	4+94.00	5+58.00	N57°22'47"W	64.00



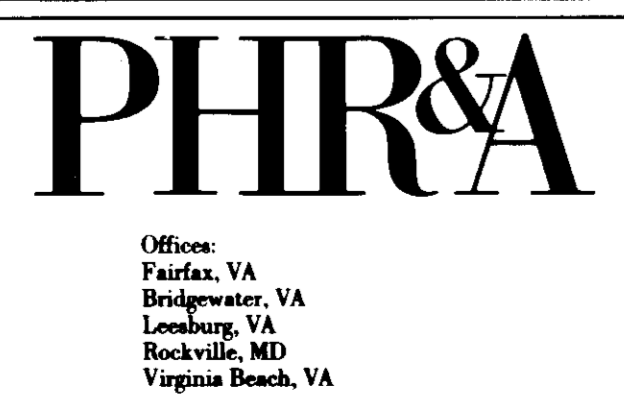
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- ALL RADII ARE TO BE FIVE FEET (5') UNLESS OTHERWISE NOTED.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
DATE: 7-17-89

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
DATE: 8/17/89

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
DATE: 7-18-89

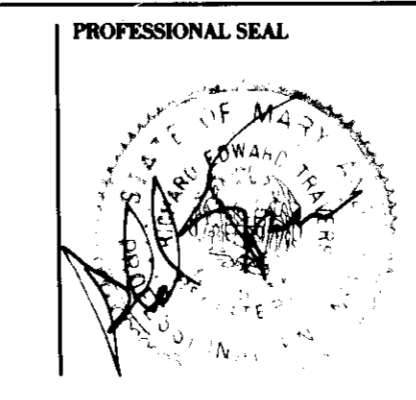
6-9-89  
LKS



CLIENT  
OWNER/DEVELOPER  
GORMAN ROAD LIMITED PARTNERSHIP  
C/O JAMES P. KNOTT DEVELOPMENT CORPORATION  
110 WEST ROAD, SUITE 203  
TOWSON, MARYLAND 21284  
(301) 321-6436

JOB  
**BOWLING BROOK FARMS  
PARCEL M -APARTMENTS**  
A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
SIXTH ELECTION DISTRICT  
TAX MAP 47 PARCEL 141  
L.1394 F.632

TITLE  
**SITE DEVELOPMENT PLAN**



NO. REVISIONS DATE BY

1	ISSUED TO HOWARD COUNTY	2-28-89	
2	ISSUED TO HO. CO. FOR 2ND REVIEW	4-17-89	
3	ISSUED TO HO. CO. FOR SIGNATURE	6/20/89	
4	REVISED PER LAND DEV. DIVISION COMMENTS	10-3-89	

SURVEY BY FILE NO. 2184-1-13

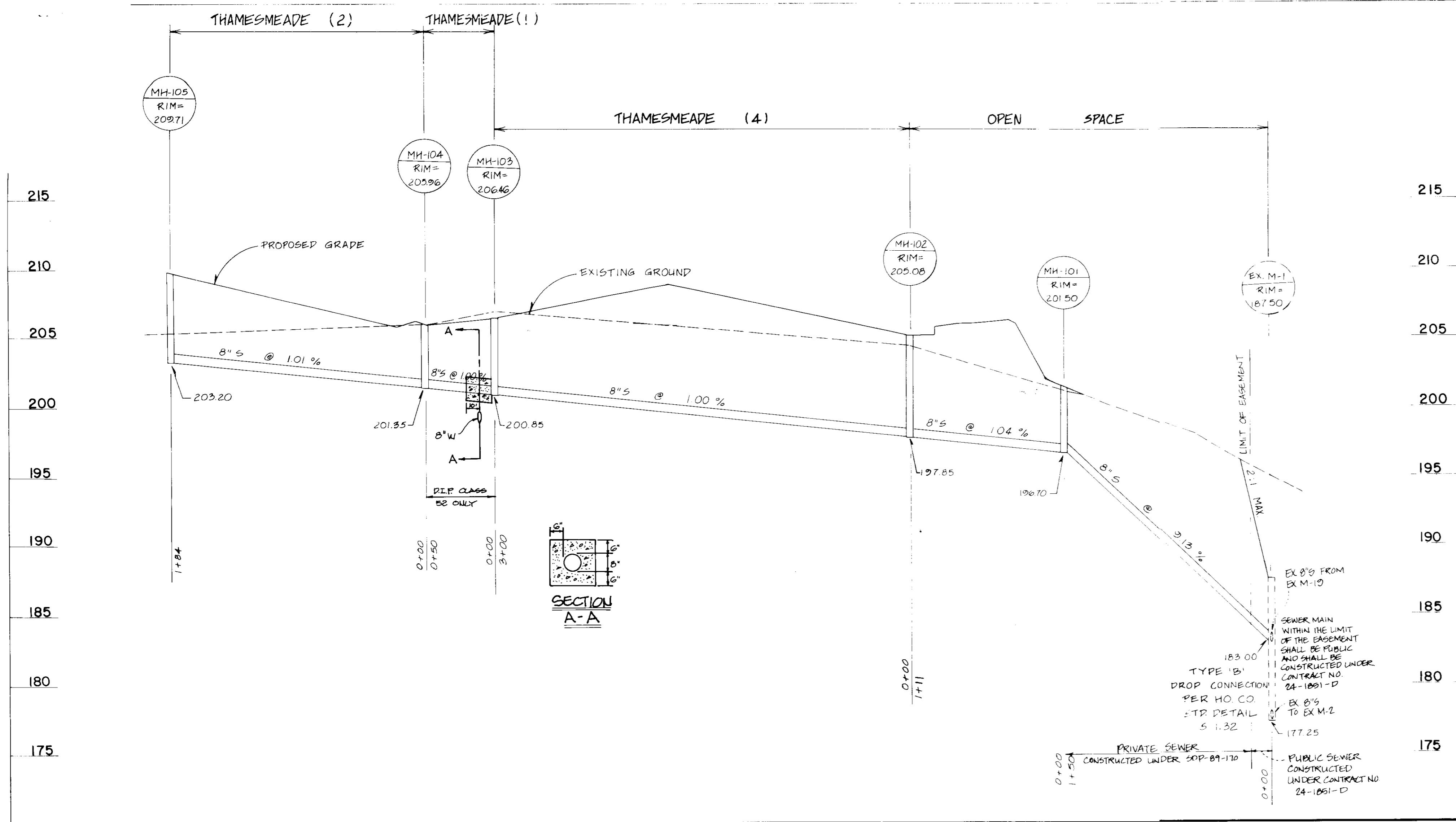
DESIGN M.J.K. DATE 2-28-89

DRAWN E.R. SCALE 1" = 30' 2'

CHAD SHEET 3 OF 16

Patton Harris Rust & Associates, PC  
Engineers, Surveyors, Planners, Landscape Architects  
7609 Standish Place  
Rockville, Maryland 20855  
301.762.2220

Office:  
Fairfax, VA  
Bridgewater, VA  
Leesburg, VA  
Rockville, MD  
Virginia Beach, VA



THAMESMEADE (1)

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

DATE 7-19-89

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

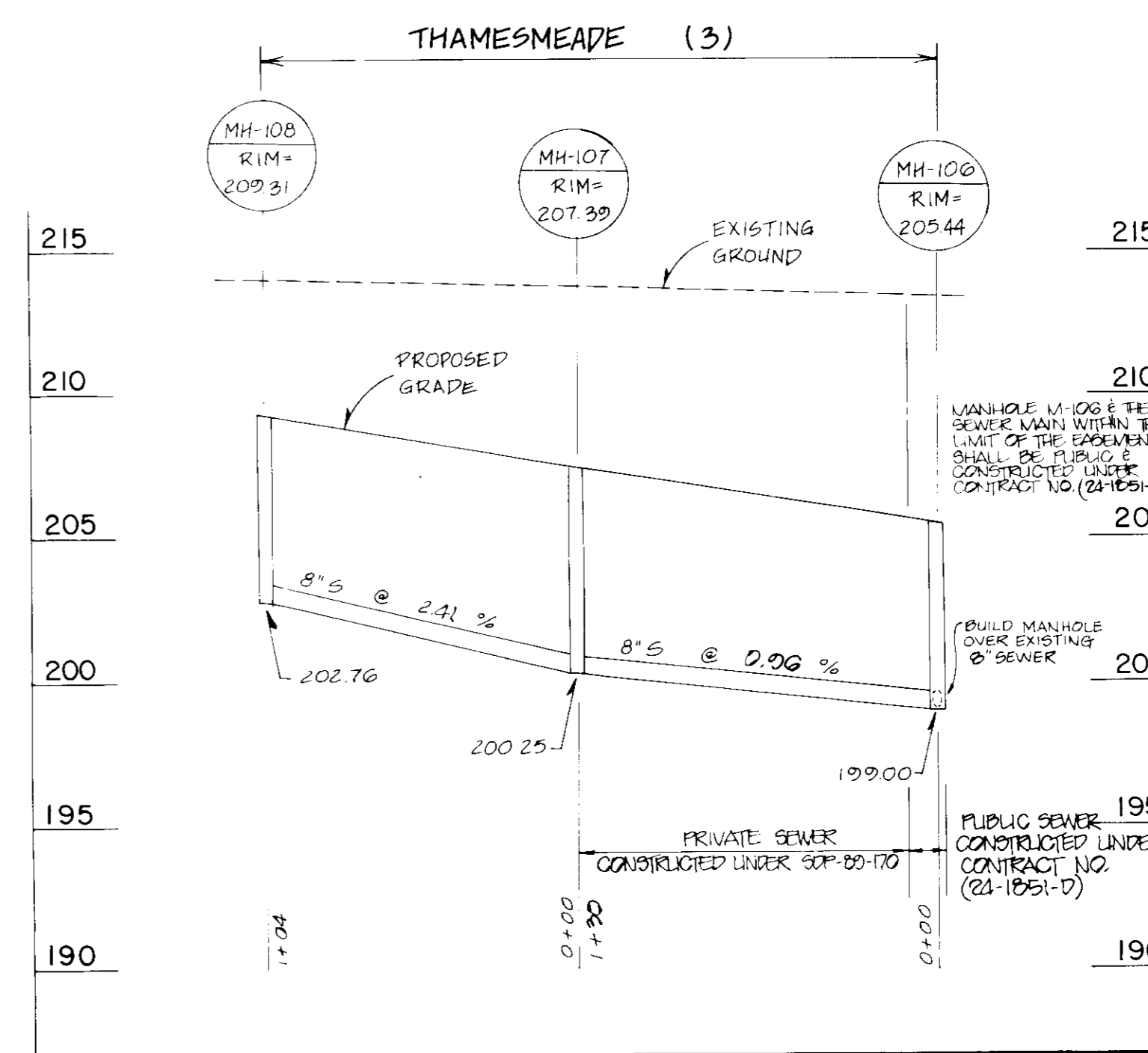
DATE 8/17/89

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE  
STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

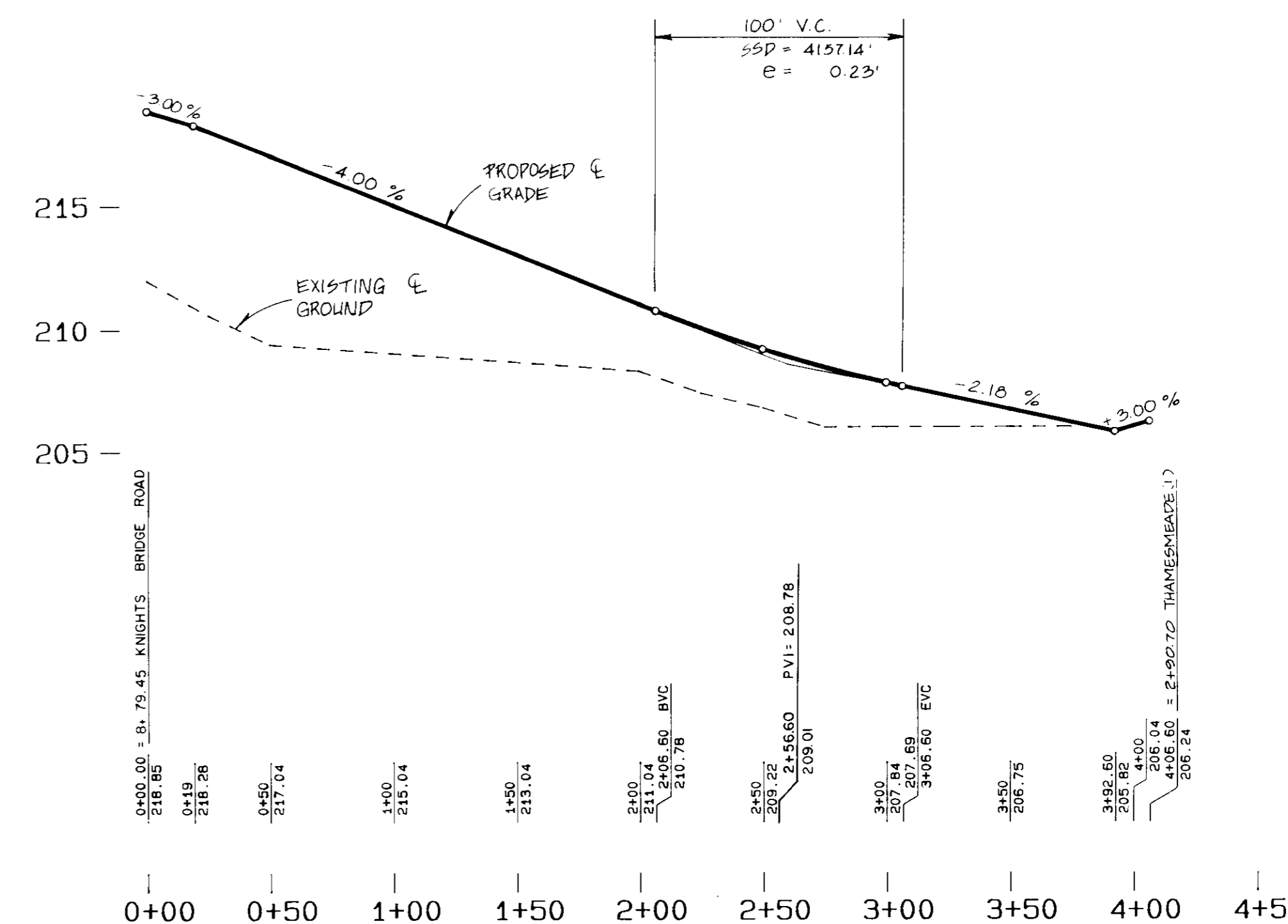
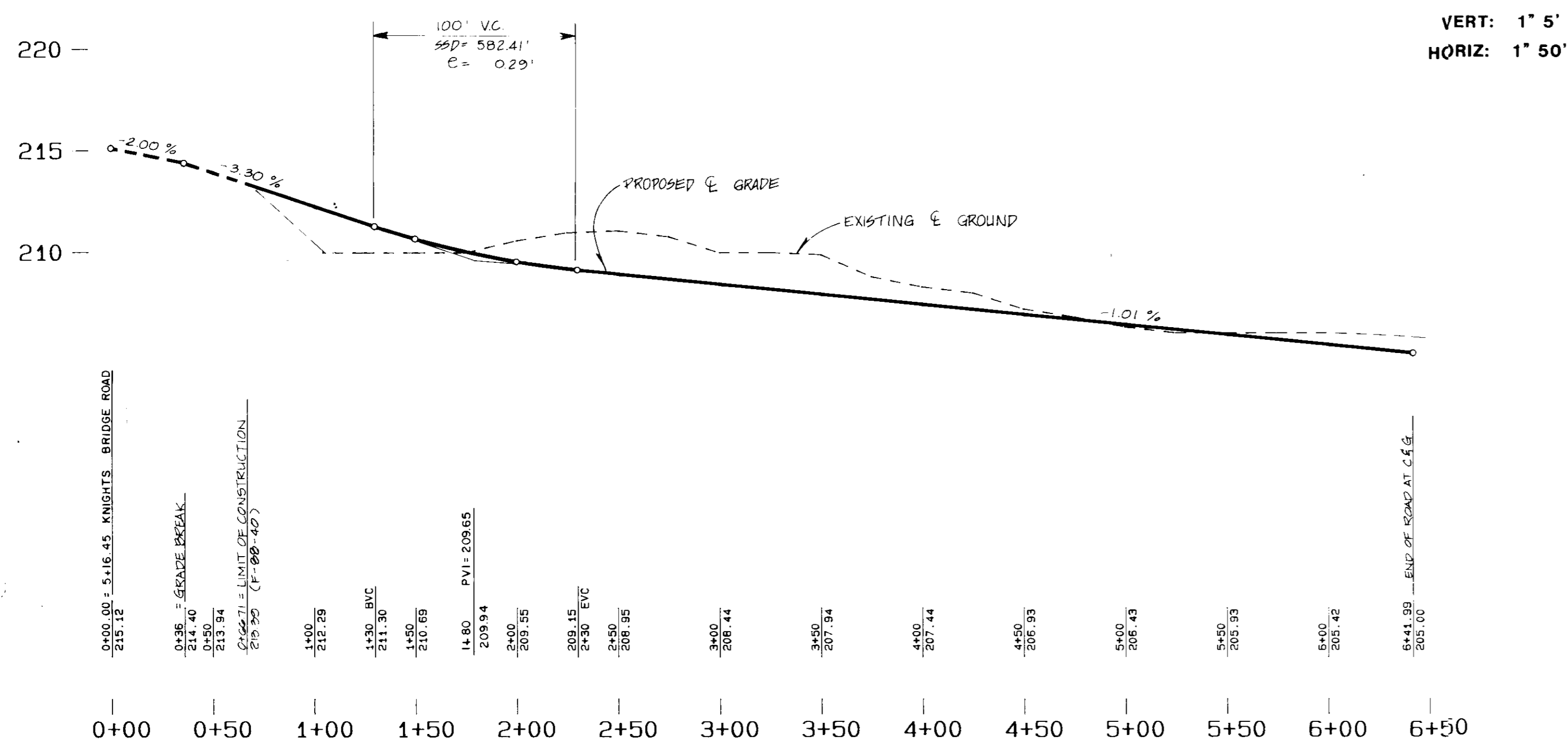
DATE 7/27/89

DATE 7-13-89

HOWARD COUNTY APPROVAL



THAMESMEADE (2)



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Engineers, Surveyors, Planners, Landscape Architects  
7609 Standish Place  
Rockville, Maryland 20855  
301-762-2220

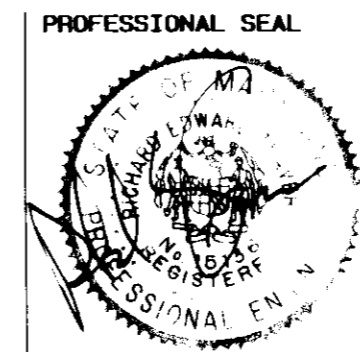
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110 WEST ROAD, SUITE 203  
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**BOWLING BROOK FARMS  
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A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
SIXTH ELECTION DISTRICT  
TAX MAP 47 PARCEL 141  
L.1394 F.632

TITLE  
**ROAD & SEWER PROFILES**

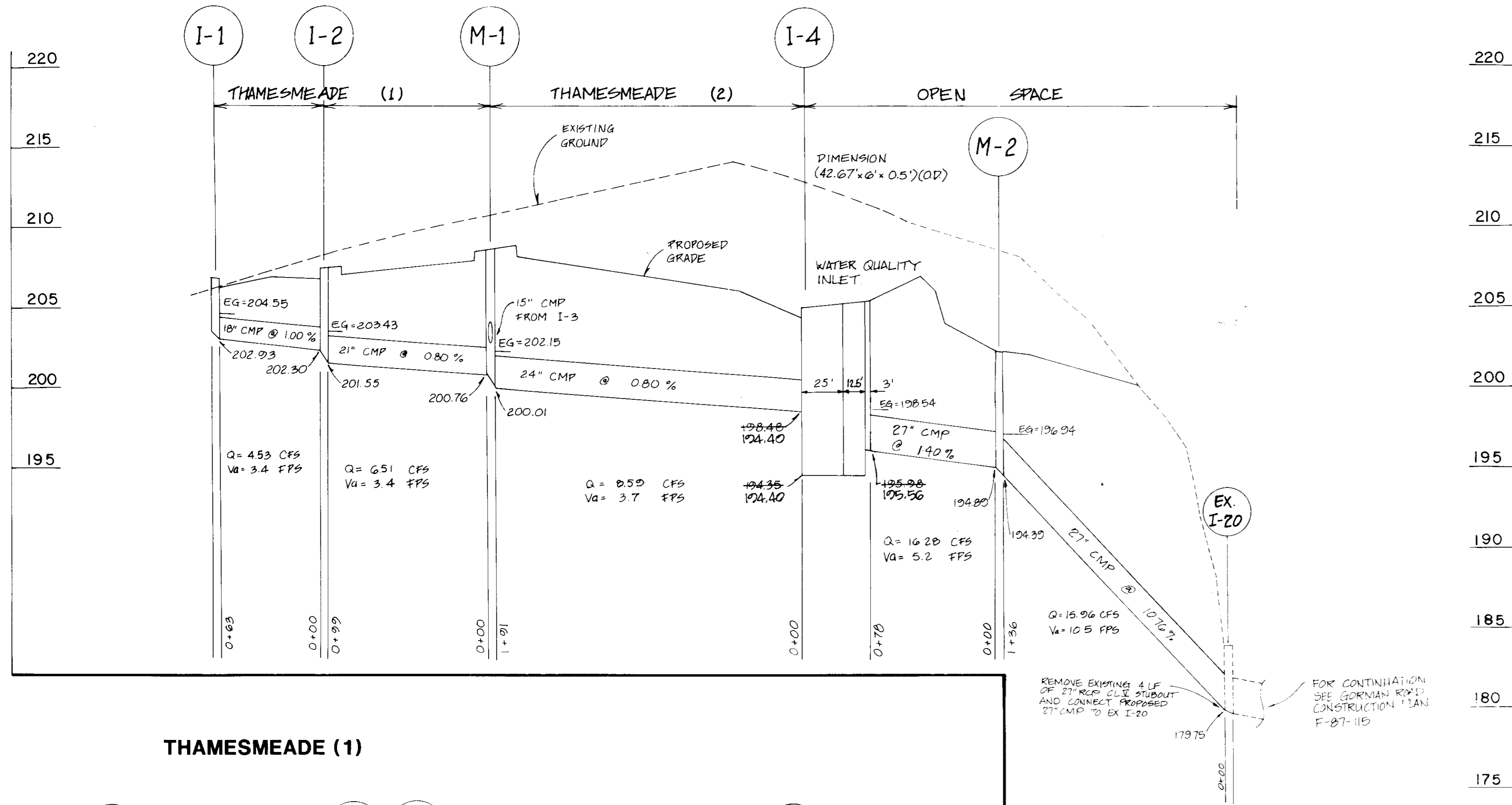


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4	REVISED PER LAND DEV. DIVISION	10-9-89	

DESIGN	DATE	FILE NO.
M.J.K.	2-28-89	2184-1-13
E.R.		
SCALE	CT	
SHEET	4	OF 16

SOP-89-170

THAMESMEADE



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

7-19-89

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

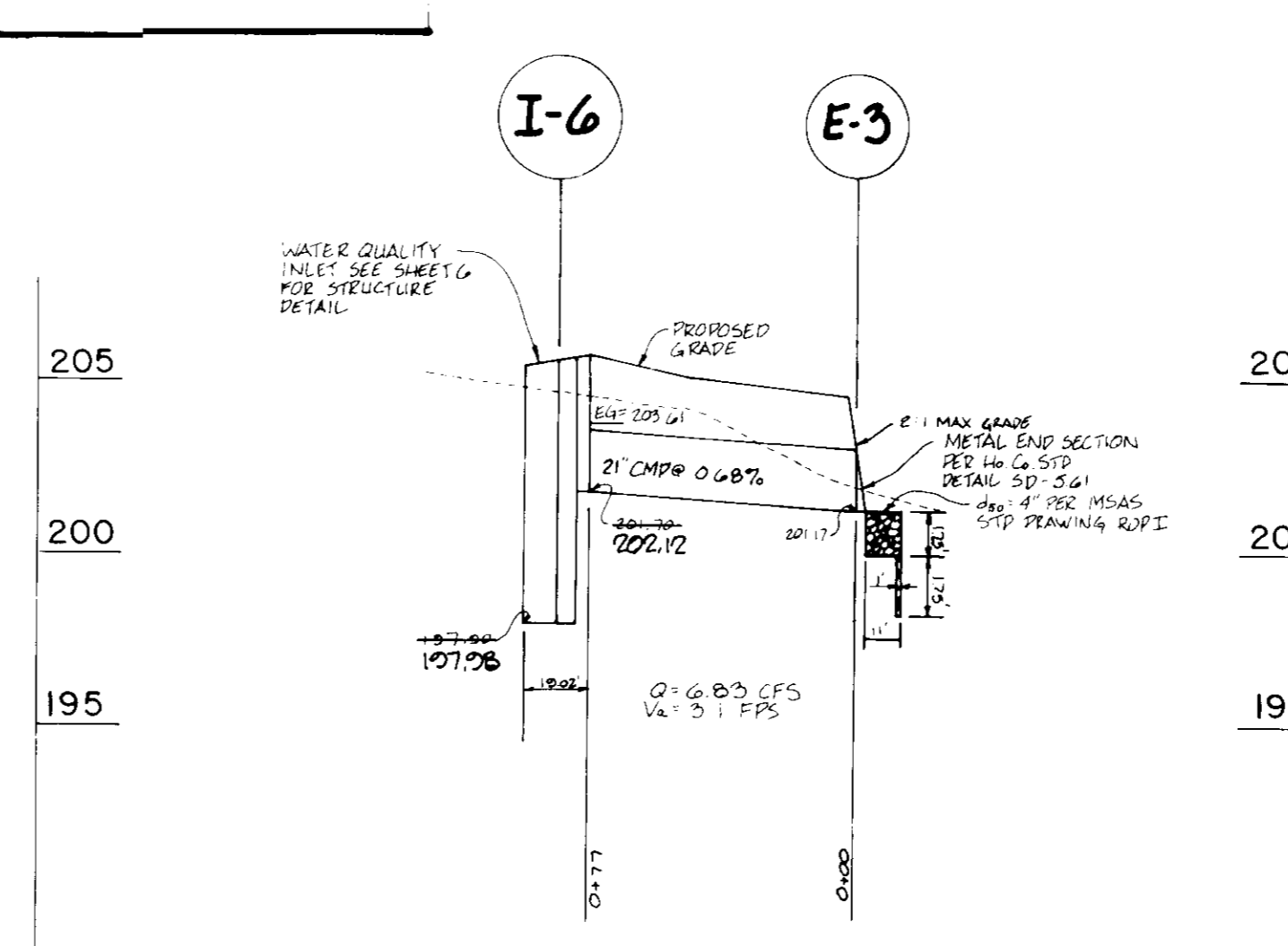
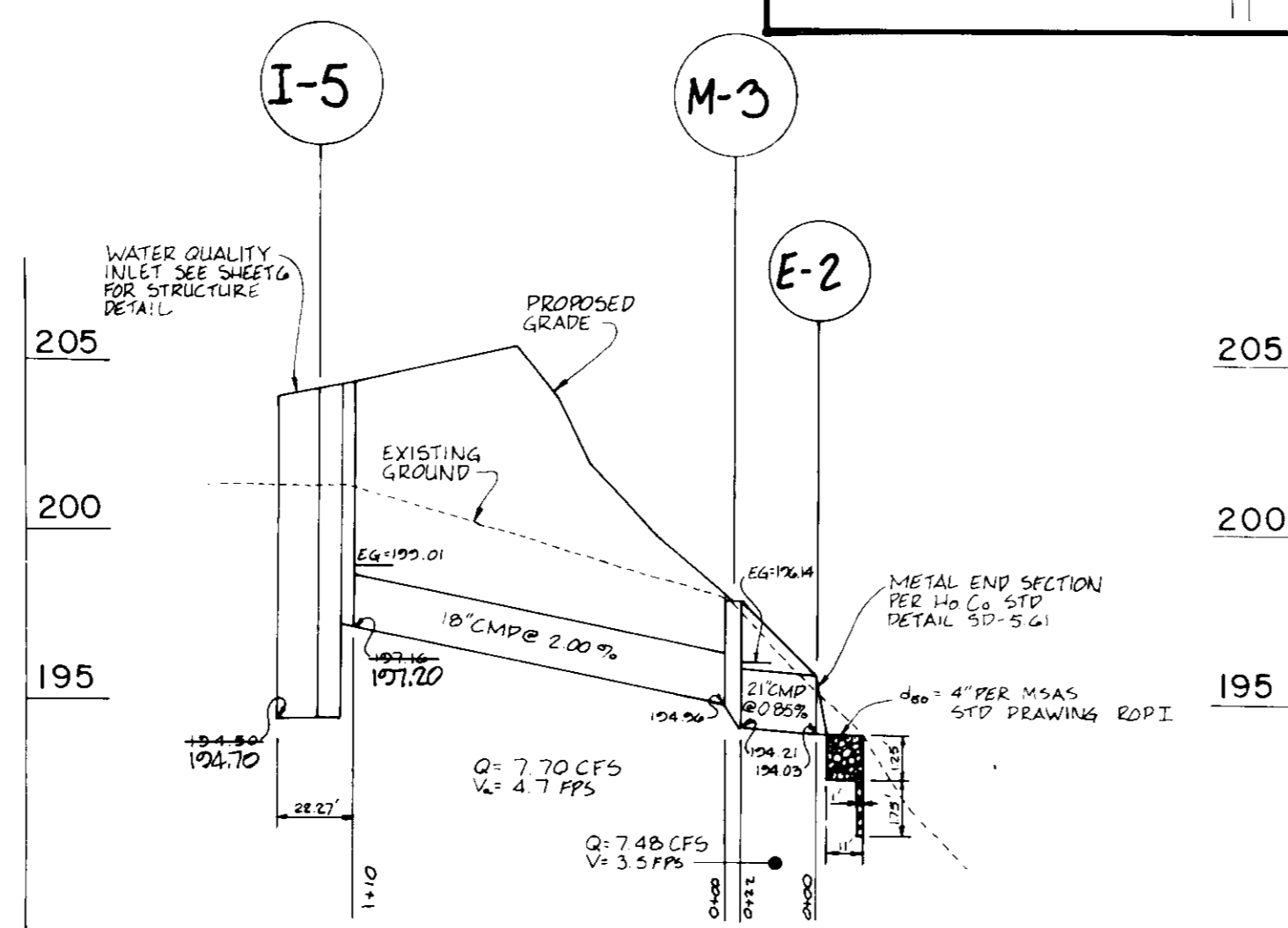
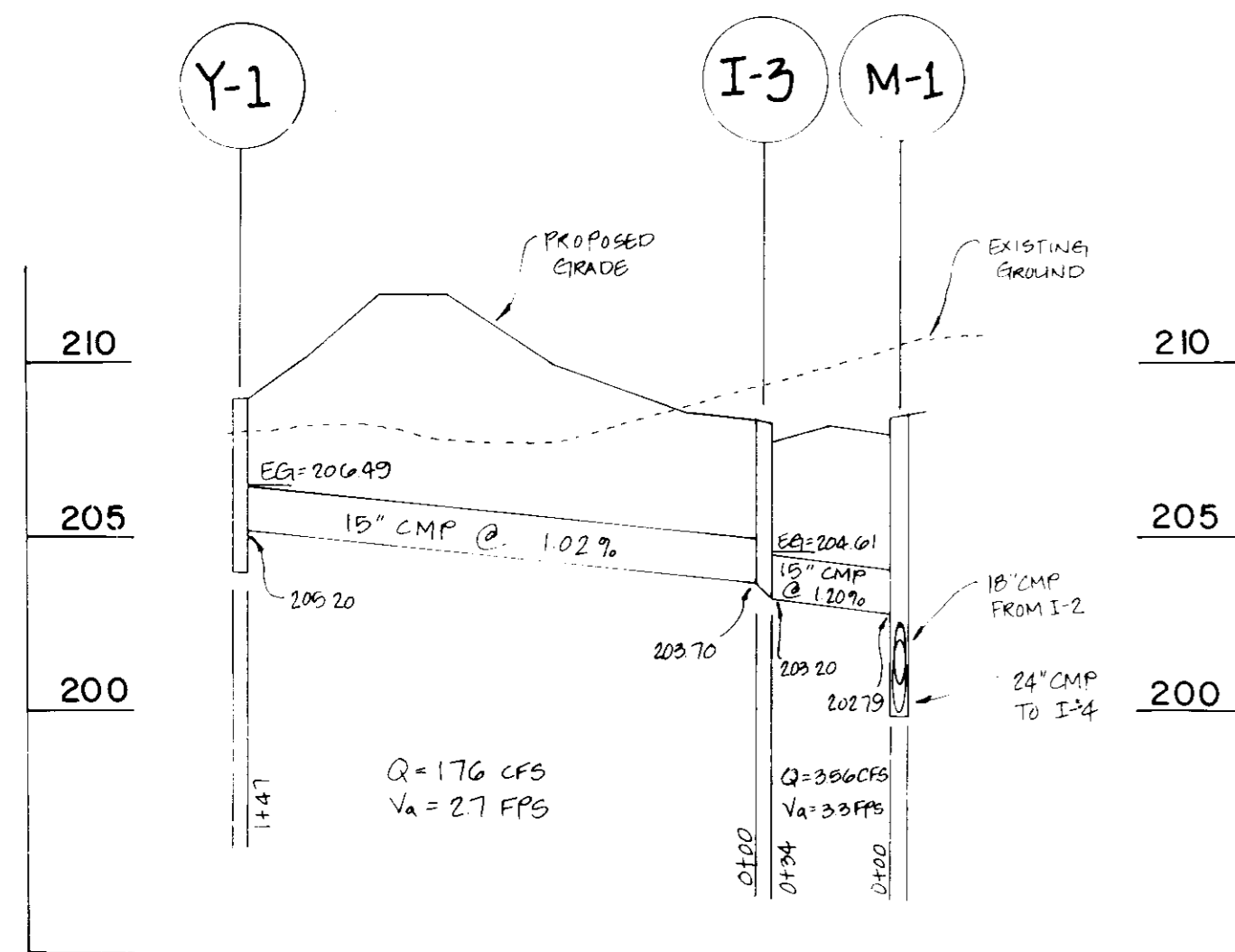
8/17/89

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

7-23-89

HOWARD COUNTY APPROVAL

THAMESMEADE (1)



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



Patton Harris Rust & Associates, P.C.  
Engineers, Surveyors, Planners, Landscape Architects  
7609 Sandhill Place  
Rockville, Maryland 20855  
301 762-2220

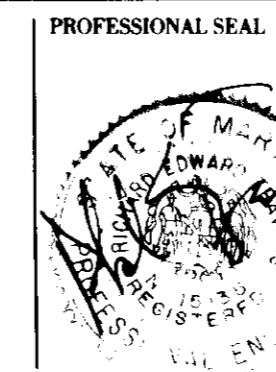
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**BOWLING BROOK FARMS  
PARCEL M -APARTMENTS**  
A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
SIXTH ELECTION DISTRICT  
TAX MAP 47 PARCEL 141  
L.1394 F.632

TITLE  
**STORM DRAIN PROFILES**



NO.	REVISIONS
1	ISSUED TO HOWARD COUNTY
2	ISSUED TO HO. CO. FOR 2ND REVIEW
3	ISSUED TO HO. CO. FOR SIGNATURE
4	AS-BUILT REVISIONS

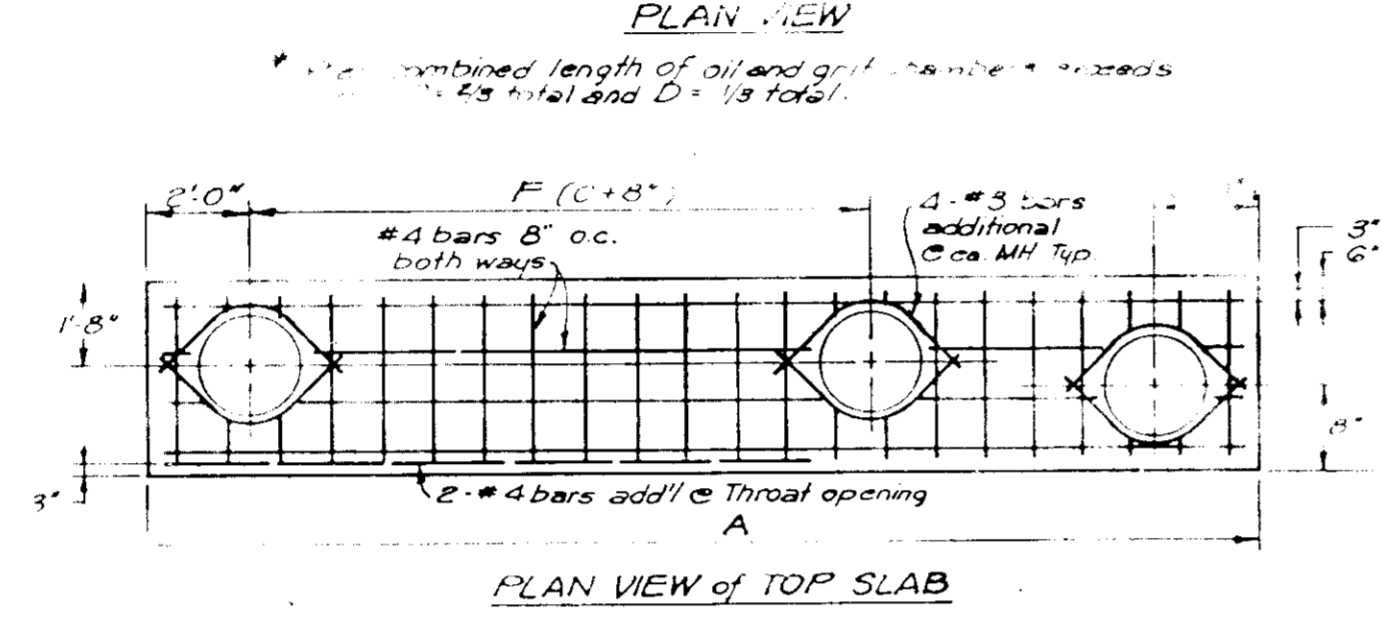
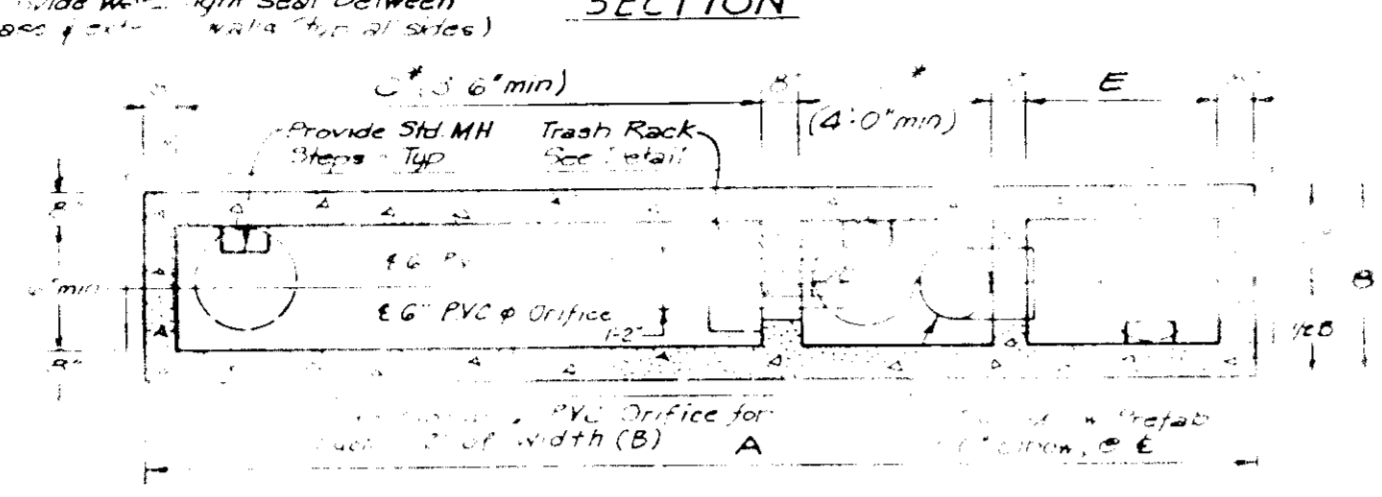
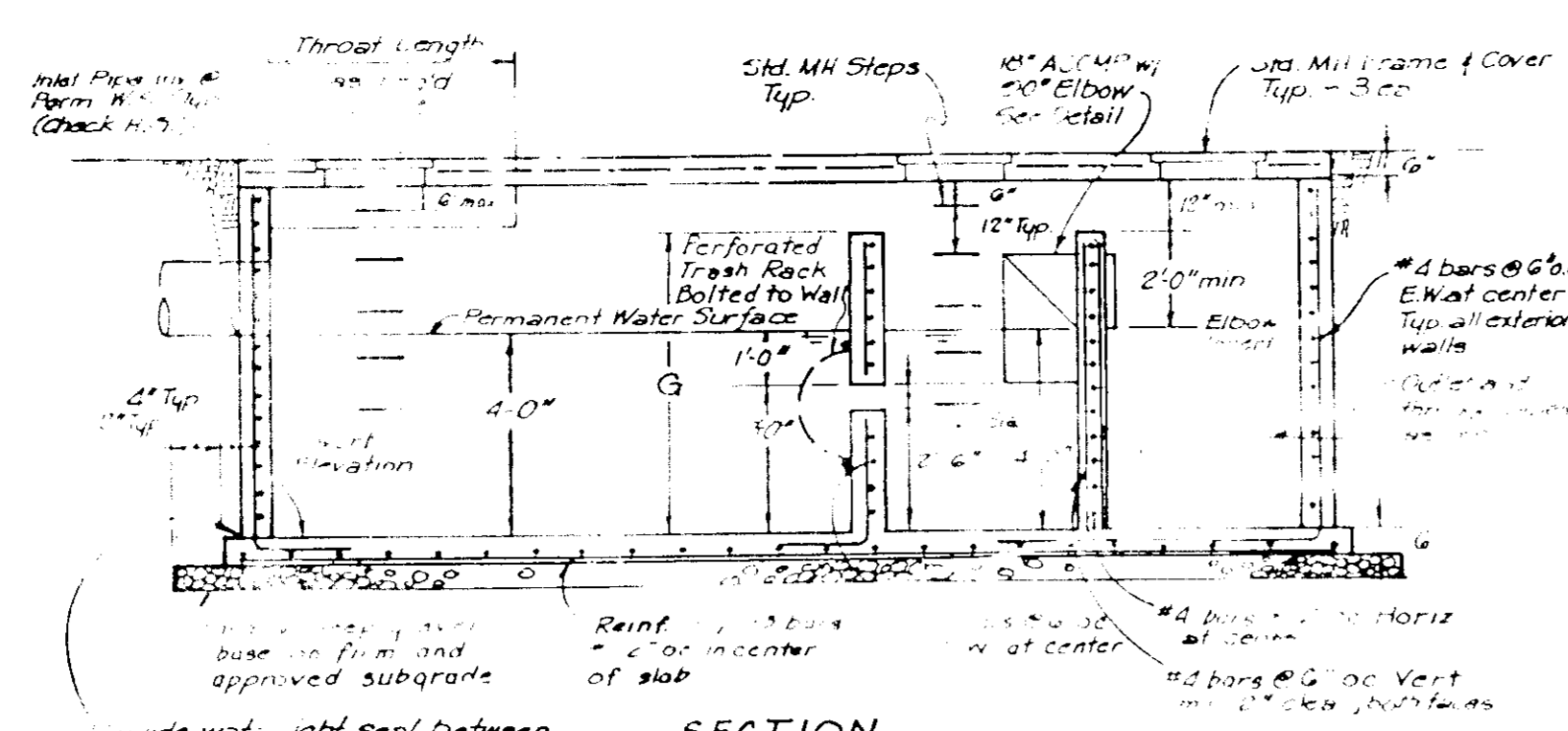
DATE	BY	SURVEY BY	FILE NO.
2-28-89			2184-1-13
4-17-89		DESIGN M.J.K.	DATE 2-28-89
6/20/89		DRAWN E.R.	SCALE CI
9/7/91	BP	CHKD	SHEET 5 OF 16

AS-BUILT

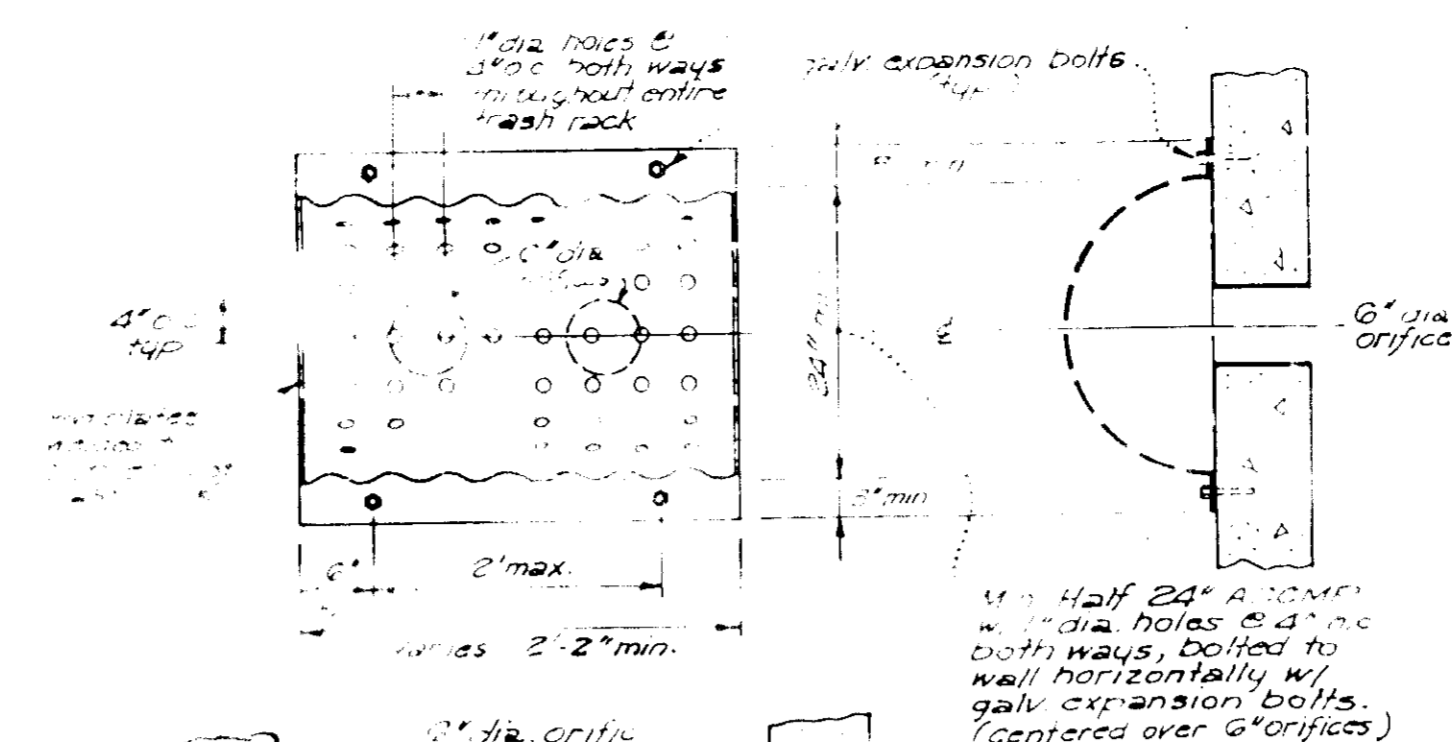
SDP-89-170

GENERAL NOTES

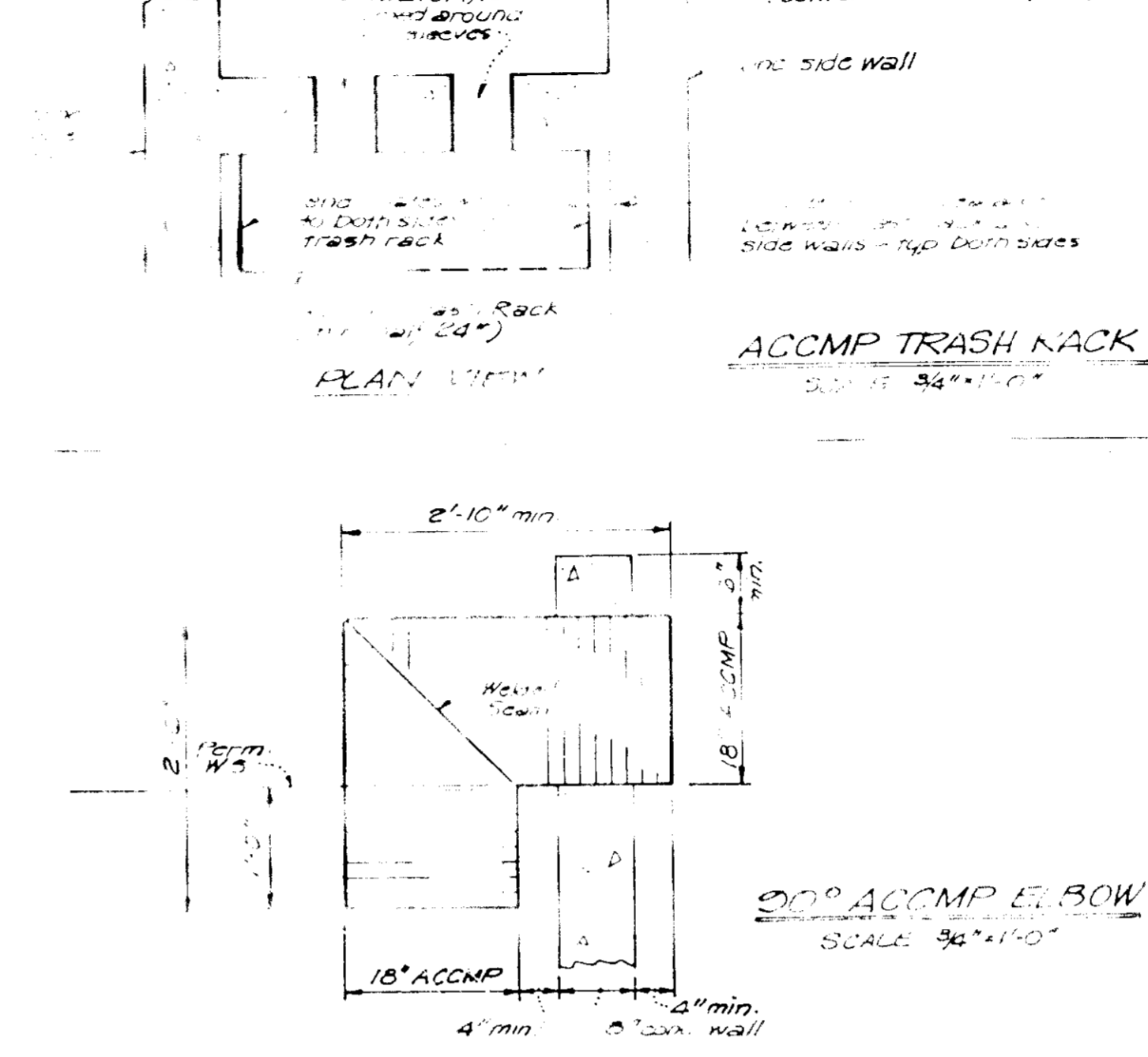
- Use poured in place concrete for the entire structure.
- Refer to Maryland State Highway Administration materials and methods of construction.
- Wall thickness shall be as follows:  
Minimum 8 inches thick for the first 4' of depth,  
12 inch thick walls between 4' and 20' depth,  
and 14 inch thick walls for depths greater than 20'.  
Depth to be measured from top of structure to top of outgoing pipe.
- Minimum 800 psi at 28 days.
- All reinforcing steel to be ASTM A615, GR. 60.
- For details concerning throat openings, refer to S&B 204.2



WATER QUALITY CONTROL STRUCTURE  
SCALE 1/4" = 1'-0"



ACCMP TRASH RACK  
SCALE 3/4" = 1'-0"



90° ACCMP ELBOW  
SCALE 3/4" = 1'-0"

CONSTRUCTION NOTES

- Silt and debris shall not be allowed to enter the structures until contributing drainage areas have been permanently stabilized.
- All openings to structures shall be protected with the appropriate sediment control measures during construction.

INSPECTION NOTES

- Prior to start of construction on water quality structures, the HC CO inspector must be called 48 hours in advance at 732-1114.
- The HC CO inspector must be notified 72 hours in advance of the following stages:  
A. Approval of subgrade for footings.  
B. Footing formed and steel set prior to pouring.  
C. Structure side, formed and steel set prior to pouring.  
D. Prior to top slab and manholes being set, HC CO inspector must check structure and all debris and silt in structure removed.  
E. When site is permanently stabilized and sediment control measures to protect inlet are to be removed.

STRUCTURE DATA:

STRUCTURE NUMBER	DRAIN AREA	VOL. REQ'D	VOL. PROV.	DIMENSIONS							PERIMETER		DRY VOLUME		TOTAL
				A	B	C*	D*	E	F	G	PERIMETER	PERIMETER	PERIMETER	PERIMETER	
I-4	4.57 AC	1828 CF	1828 CF	43.17'	6.33'	25.00'	12.50'	3.00'	25.67'	9.75'	194.40'	198.40'	10.00'	205.60'	205.60'
I-5	1.95 AC	620 CF	620 CF	22.27'	6.00'	11.10'	5.50'	3.00'	11.77'	5.00'	124.50'	126.50'	10.00'	204.40'	204.40'
I-6	1.20 AC	400 CF	400 CF	22.88'	6.00'	11.44'	5.72'	3.00'	12.11'	6.00'	127.20'	129.20'	10.00'	205.70'	205.70'
I-4	4.57 AC	1828 CF	1828 CF	43.17'	6.33'	25.00'	12.50'	3.00'	25.67'	9.75'	194.40'	198.40'	10.00'	205.60'	205.60'
I-5	1.95 AC	620 CF	620 CF	22.27'	6.00'	11.10'	5.50'	3.00'	11.77'	5.00'	124.50'	126.50'	10.00'	204.40'	204.40'
I-6	1.20 AC	400 CF	400 CF	22.88'	6.00'	11.44'	5.72'	3.00'	12.11'	6.00'	127.20'	129.20'	10.00'	205.70'	205.70'

NOTES:

For storm drain inverts, see storm drain profiles.  
Storage required = 40 c.f. per 0.1 Ac. of drainage area.  
(total storage computed to drain (G))  
\*When combined length of oil and grit chambers exceeds 12 feet,  
"D" = 1/2 X "C" + "E" = 2/3 total and "D" = 1/3 total.

TOTAL DRAINAGE AREA GOING TO I-4:

Y-1 = 0.84 AC.  
I-1 = 0.89 AC.  
I-2 = 0.32 AC.  
I-3 = 0.94 AC.  
I-4 = 2.02 AC.  
TOTAL: 4.57 AC.

DESIGN STANDARD:  
REQUIRED VOLUME = 40 c.f./0.10 AC. TRIBUTARY TO THE WATER QUALITY STRUCTURE.

= 40 c.f. x 4.57 AC.  
= 1,828 CF.

FOR I-5:

40 CF. x 1.95 AC.  
0.10 AC.  
REQUIRED VOLUME = 620 CF.

FOR I-6:

40 CF. x 1.20 AC.  
0.10 AC.  
REQUIRED VOLUME = 480 CF.

MAINTENANCE NOTES (WATER QUALITY STRUCTURE WASTE)

- Water Quality Structures will require periodic cleaning. Owners of these facilities will have to clean them semi-annually or as needed. Maintenance of these facilities will include: cleaning out the separator and disposal of the waste and the repair of the facility as needed. Periodic inspections of these facilities will be made by the owner on a quarterly basis.
- The disposal of the liquid and solid matter should be as follows:  
A. All liquid material in the separator inlet shall be pumped into a suitable tank truck and disposed of at an approved sanitary district discharge manhole or be taken to an approved sewage treatment plant for discharge.  
B. The solid material shall be landfilled in an approved sanitary landfill.
- The inlet pipes, manhole covers, and structural parts shall be repaired as needed.

HOWARD COUNTY OFFICE OF PLANNING  
COMMUNITY PLANNING  
DATE 6-9-89  
LWS  
7-19-89  
8/17/89  
7/27/89  
7/12/89  
7-13-89



CLIENT  
OWNER/DEVELOPER  
C/O JAMES F. KNOTT DEVELOPMENT CORPORATION  
110 WEST BOND SUITE 203  
TOWSON, MARYLAND 21284  
(301) 771-0136

JOB  
BOWLING BROOK FARMS  
PARCEL M - APARTMENTS  
A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
SIXTH ELECTION DISTRICT  
TAX MAP 47 PARCEL 141  
L.1394 F.632

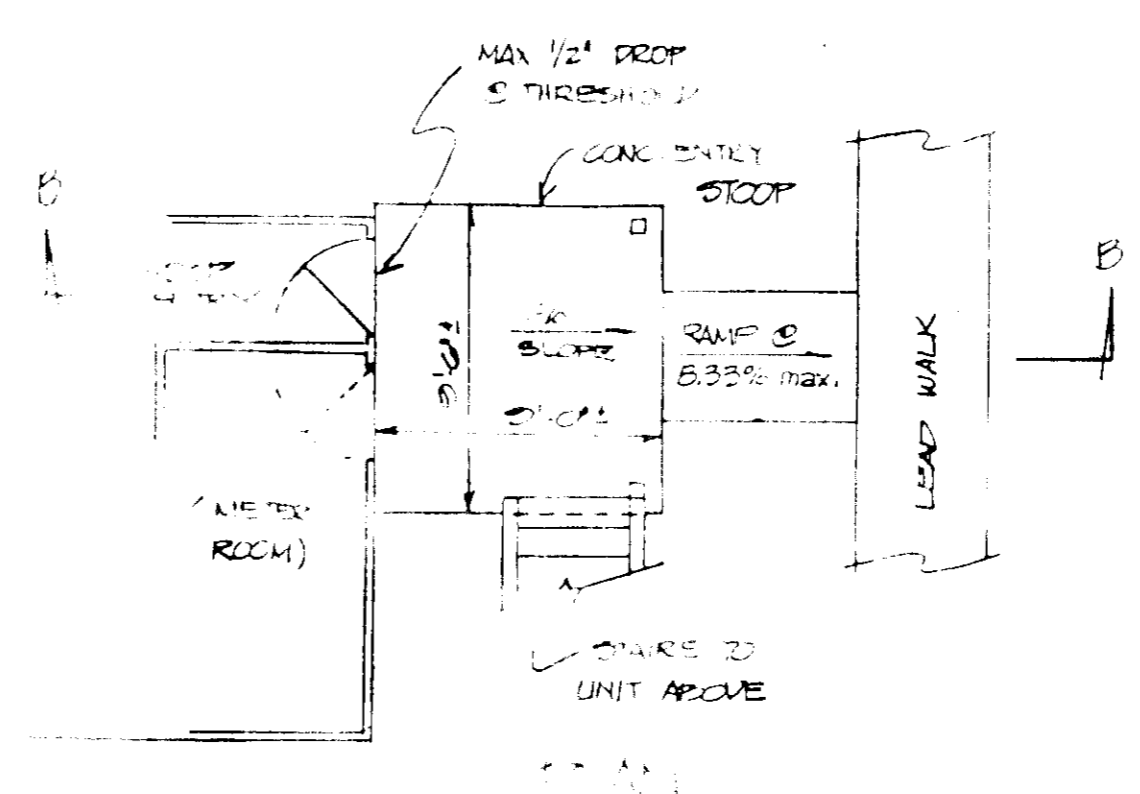
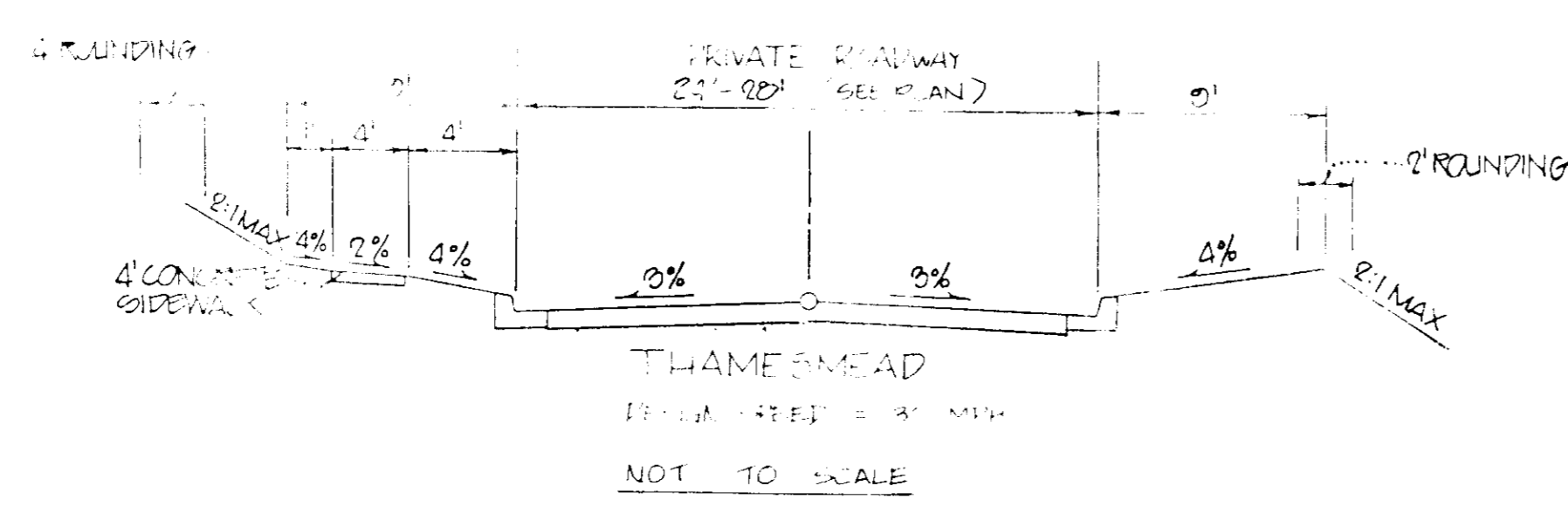
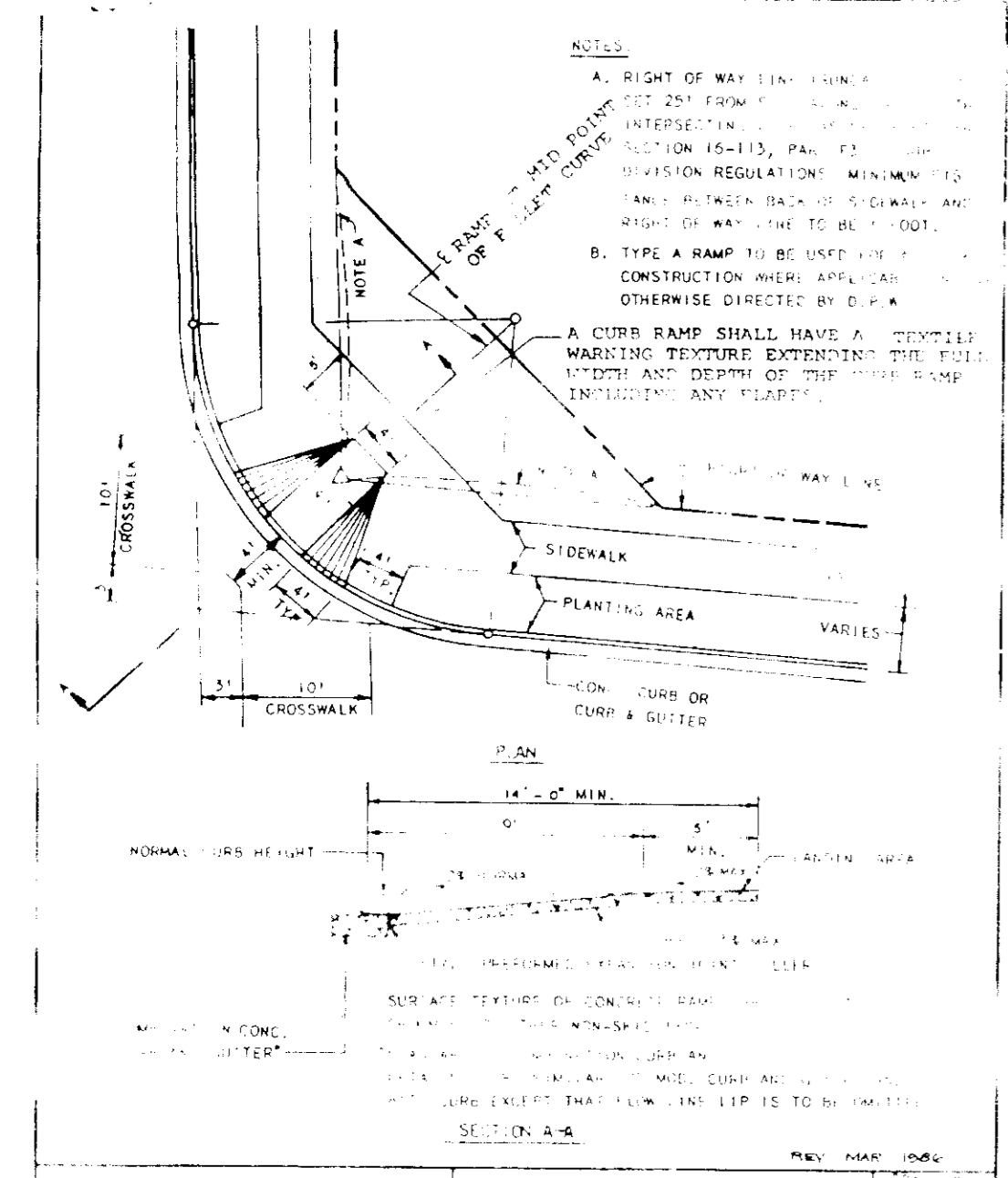
TITLE  
WATER QUALITY INLET  
DETAIL



NO.	REVISIONS	DATE	BY	SURVEY BY	REV. NO.
1	ISSUED TO HOWARD COUNTY	2-28-89			1
2	ISSUED TO HOWARD COUNTY FOR 2ND REVIEW	4-17-89			2
3	ISSUED TO HO. CO. FOR SIGNATURE	6/20/89			3
4	AS-BUILT REVISIONS	5/7/91			4

DATE	BY	SURVEY BY	REV. NO.
2-28-89			1
4-17-89			2
6/20/89			3
5/7/91			4

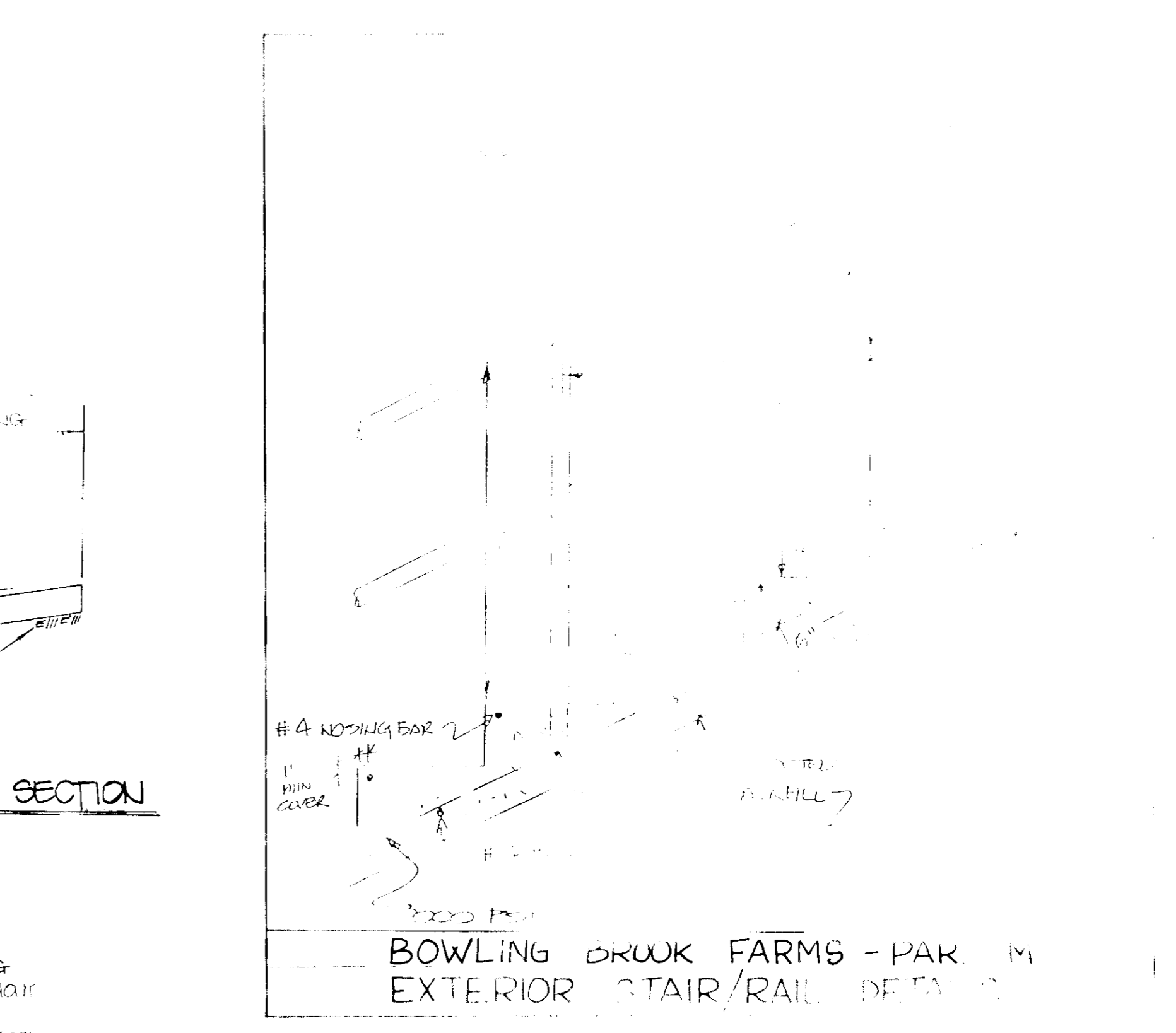
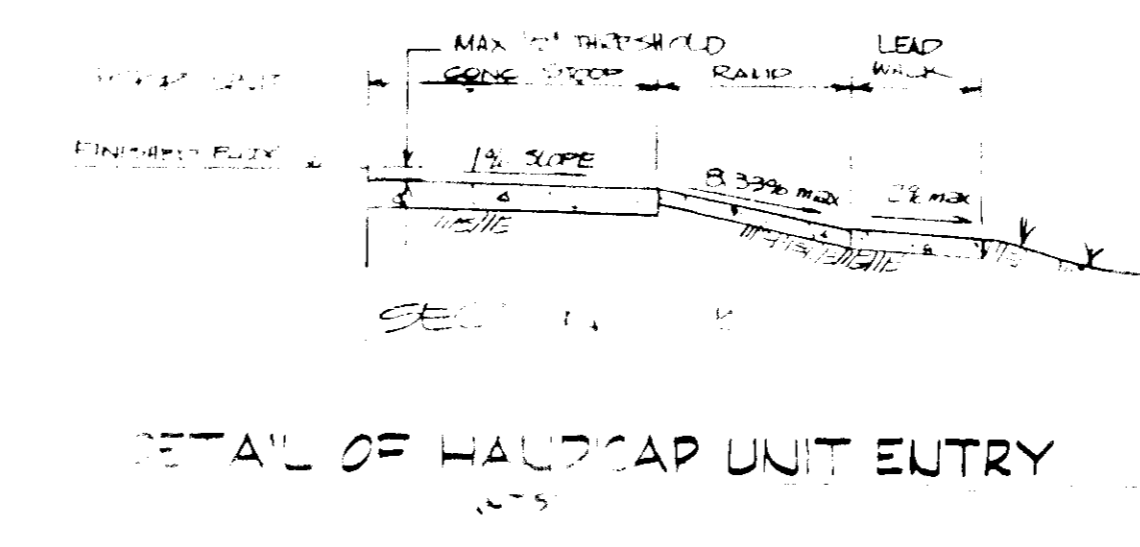
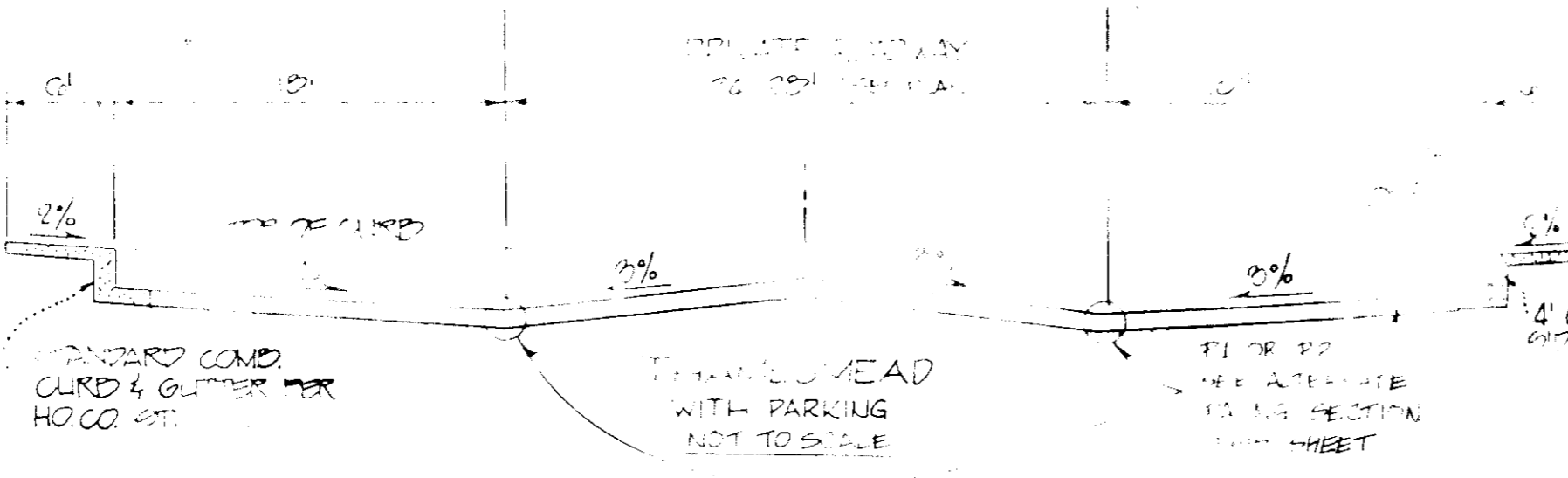
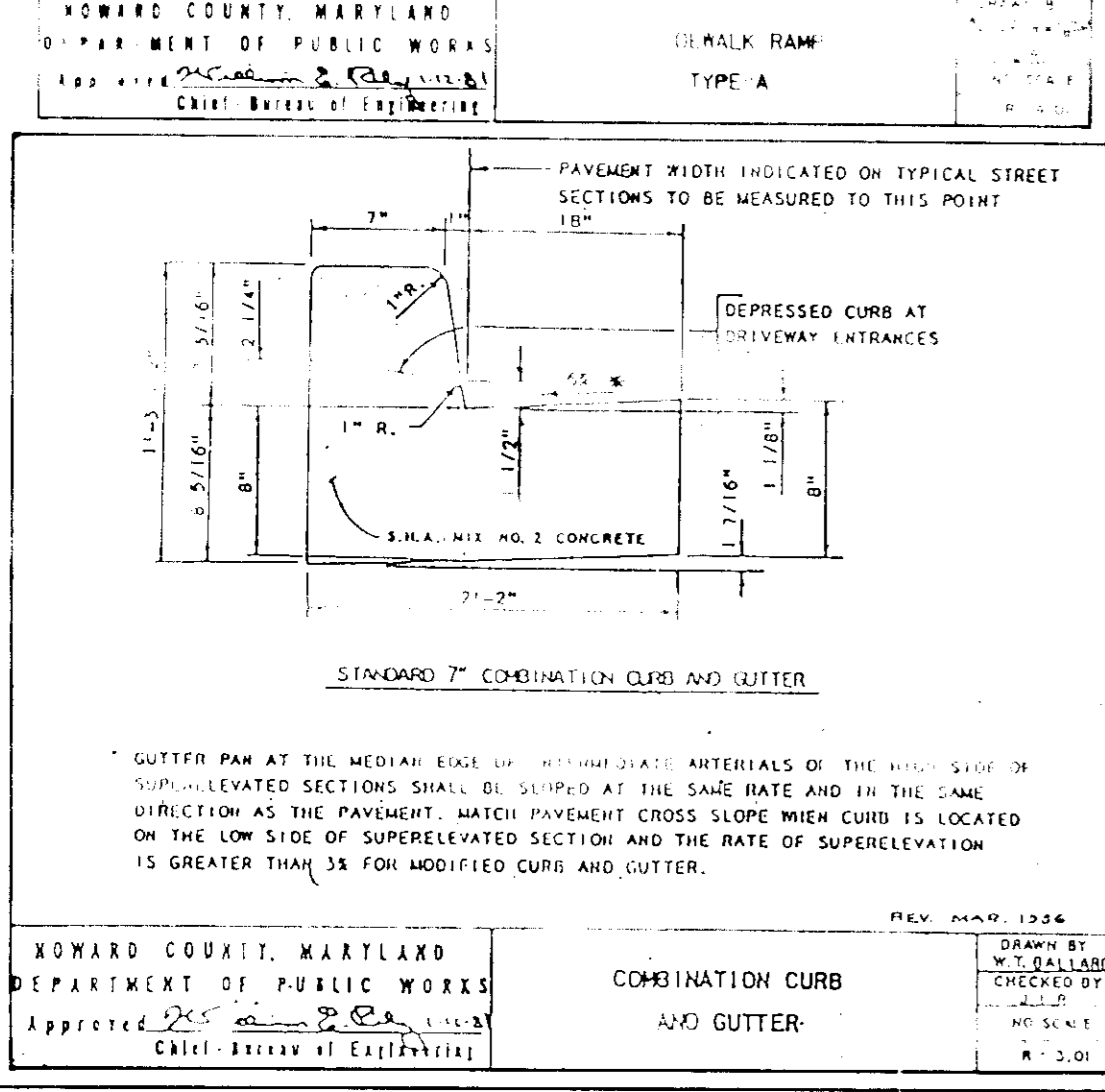
AS-BUILT



**APPROVED**  
 COM. & P.  
 DATE 6-9-89  
 LKS

7-17-87  
 8/17/89  
 7/27/89  
 7/12/89  
 7-12-89

HOWARD COUNTY APPROVAL



HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS  
 APPROVED: [Signature] Chief, Bureau of Engineering

COMBINATION CURB AND GUTTER

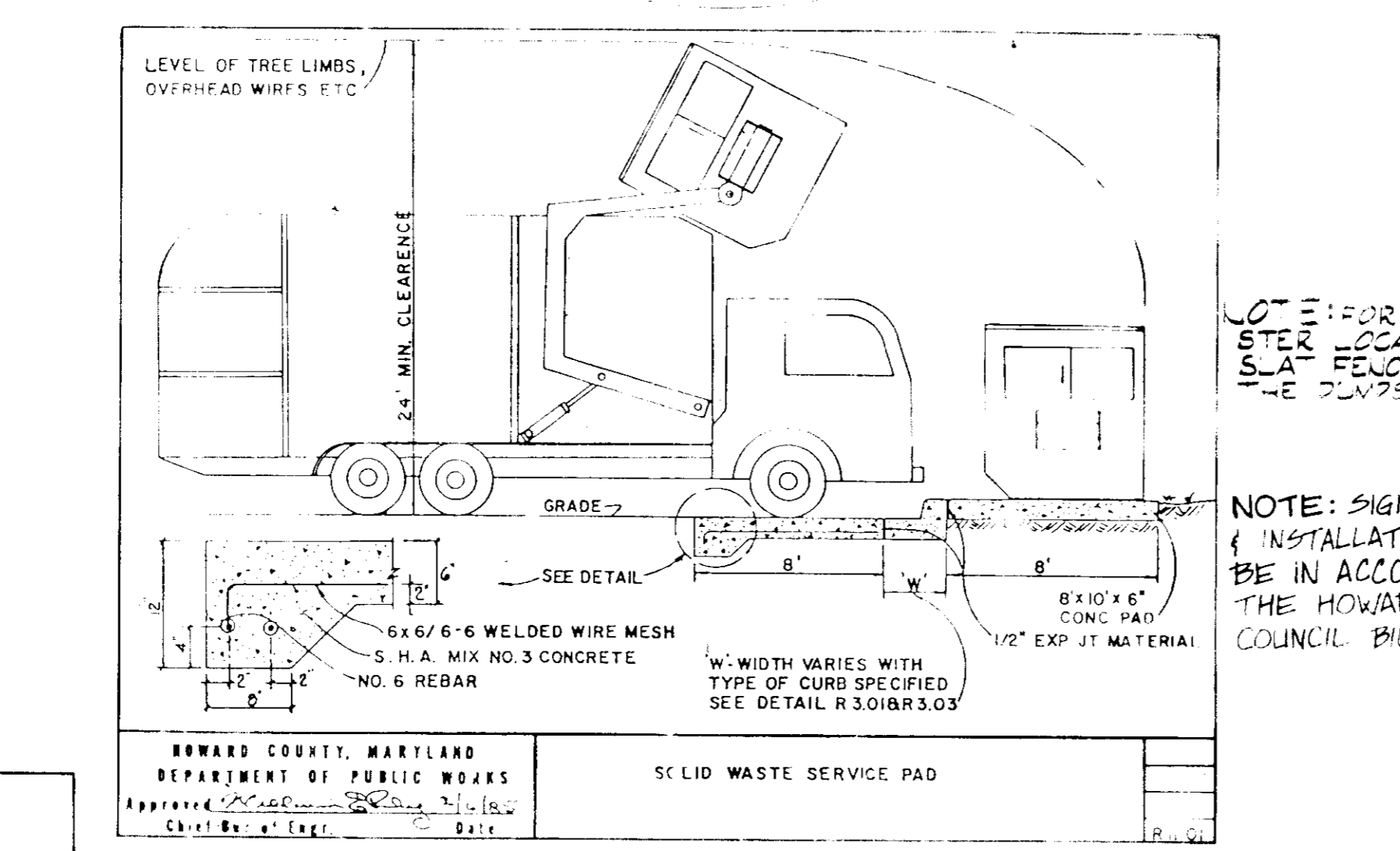
DEPTH OF BEDDING MATERIAL BELOW PIPE	MINIMUM
0"	3"
27" & smaller	4"
30" thru 60"	4"
66" & larger	6"

Figure 11.4  
 Date 5-15-78  
 Revised

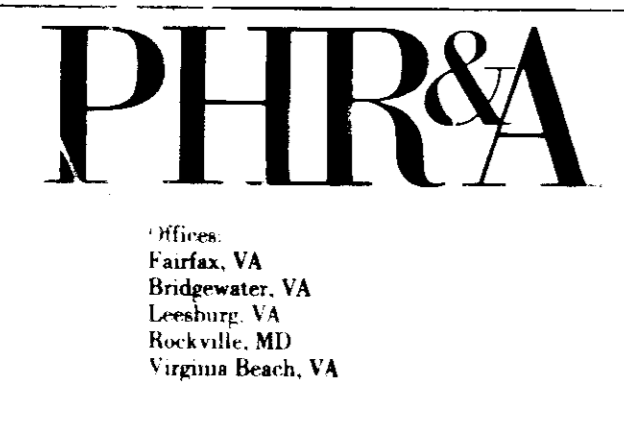
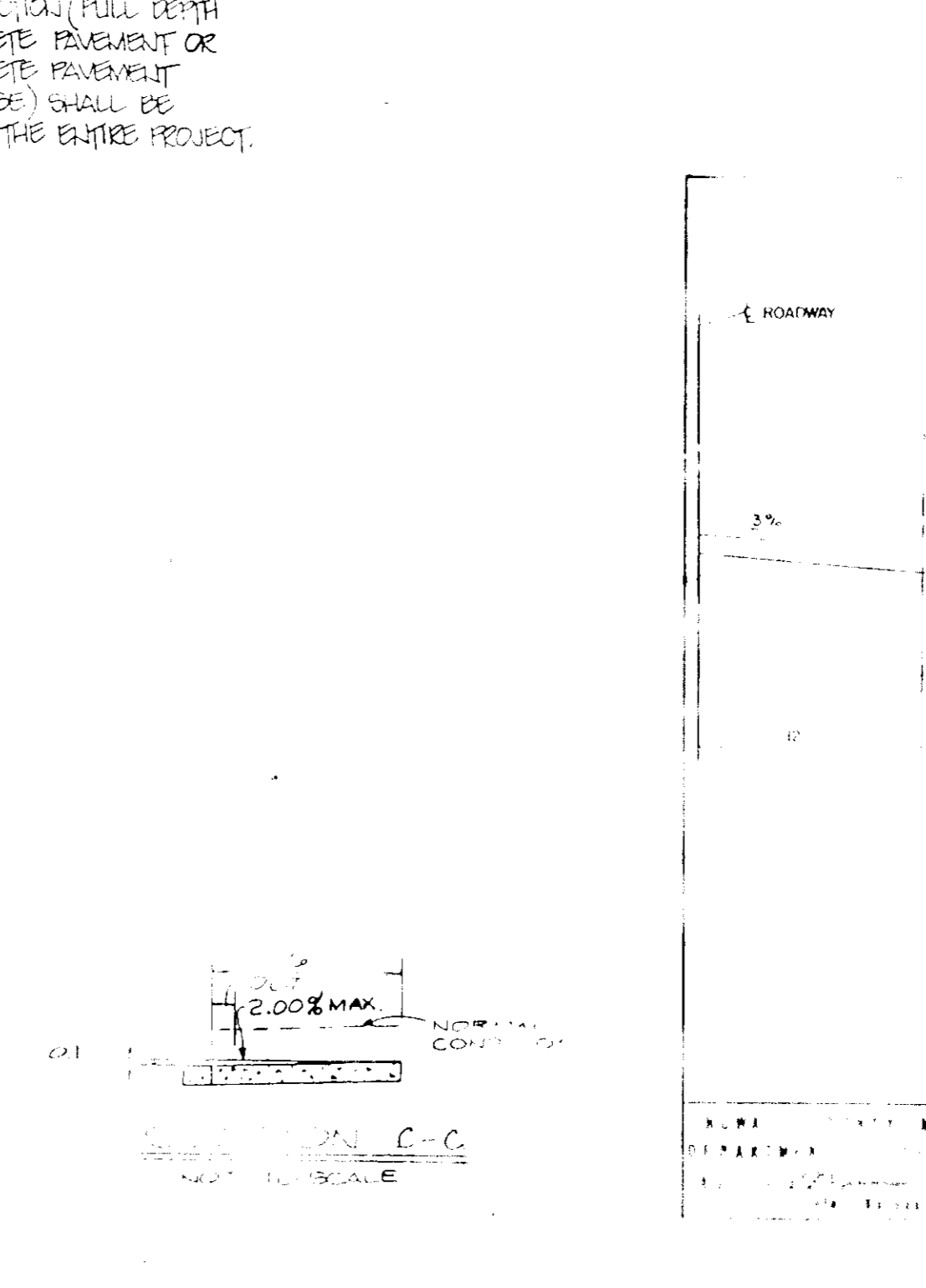
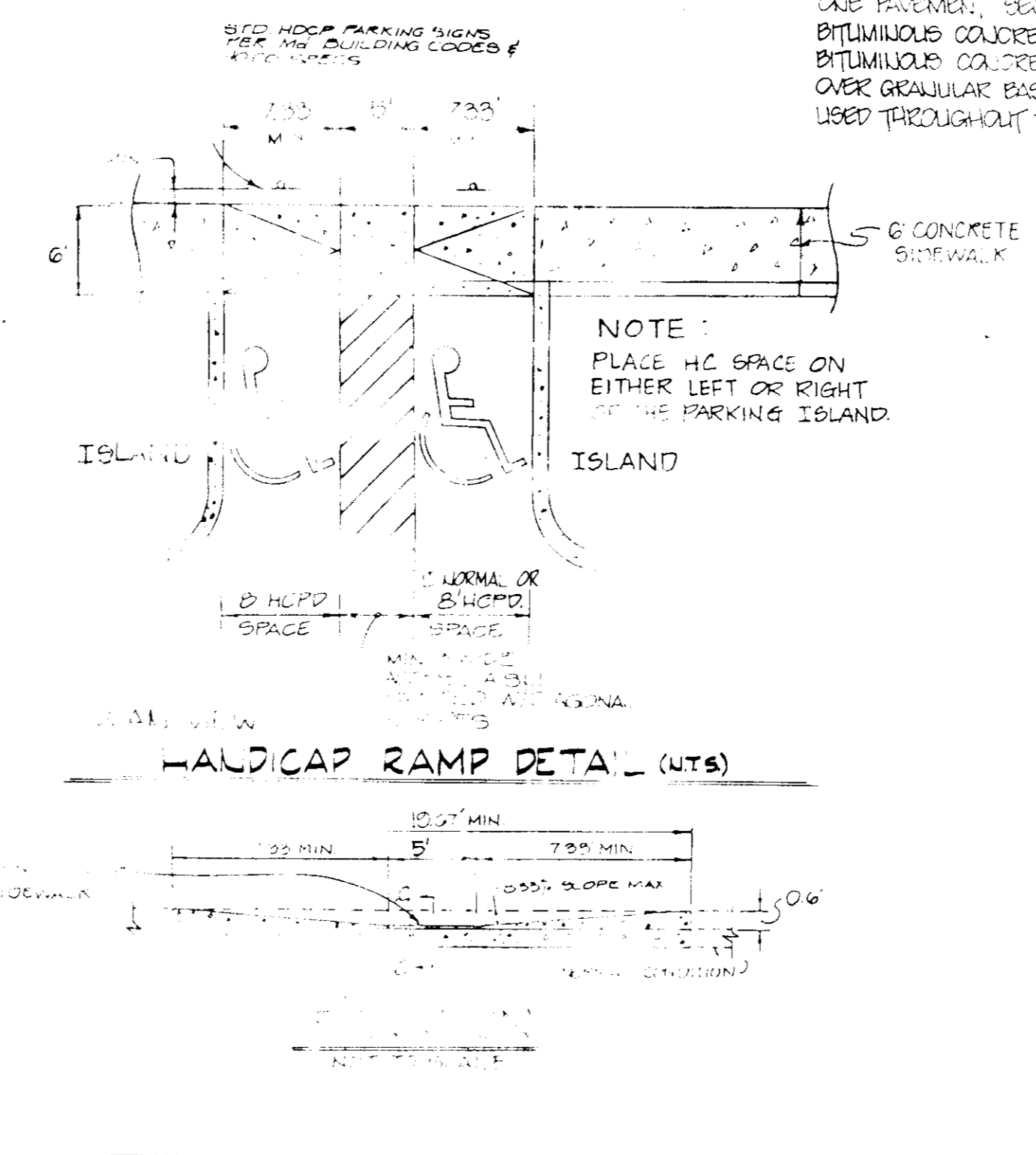
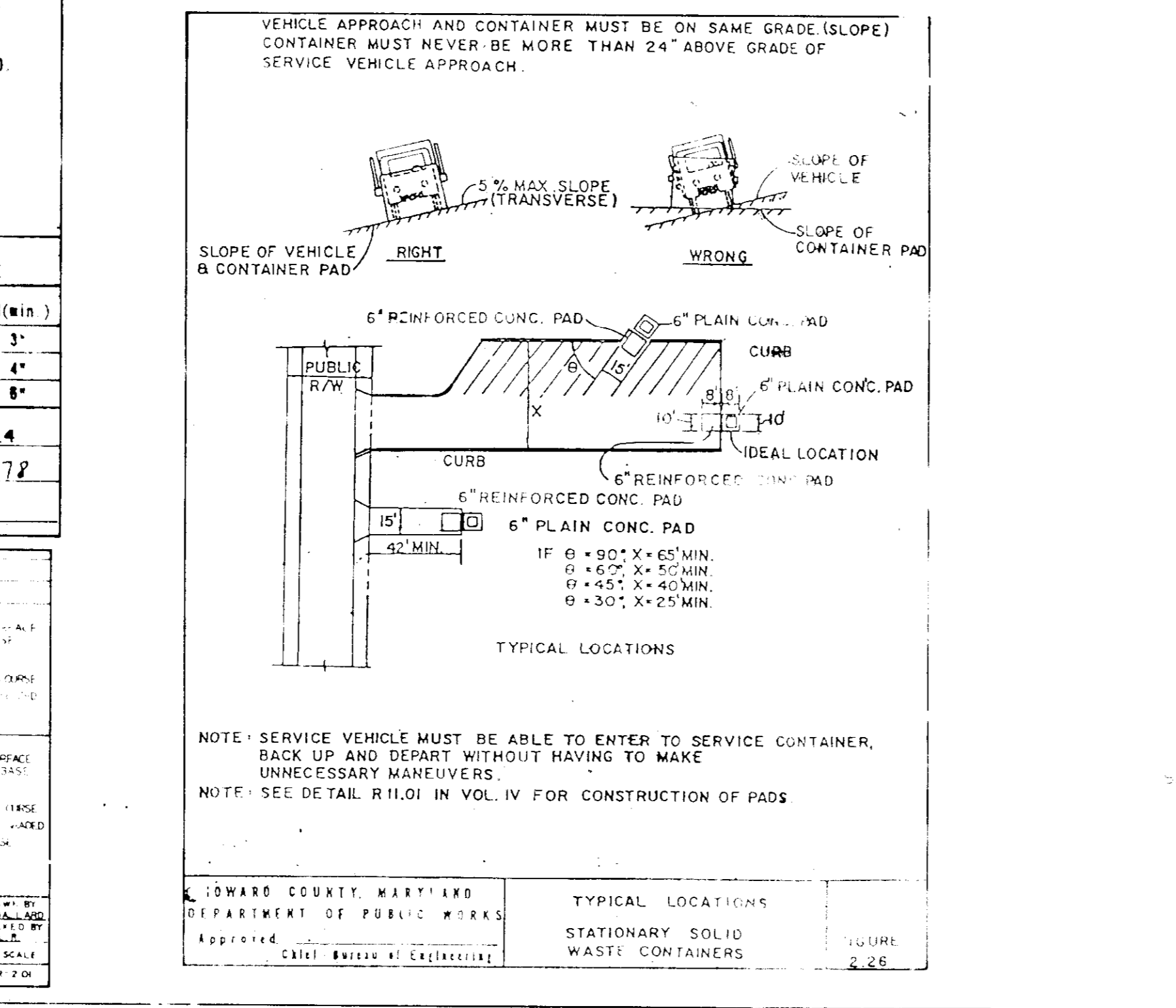
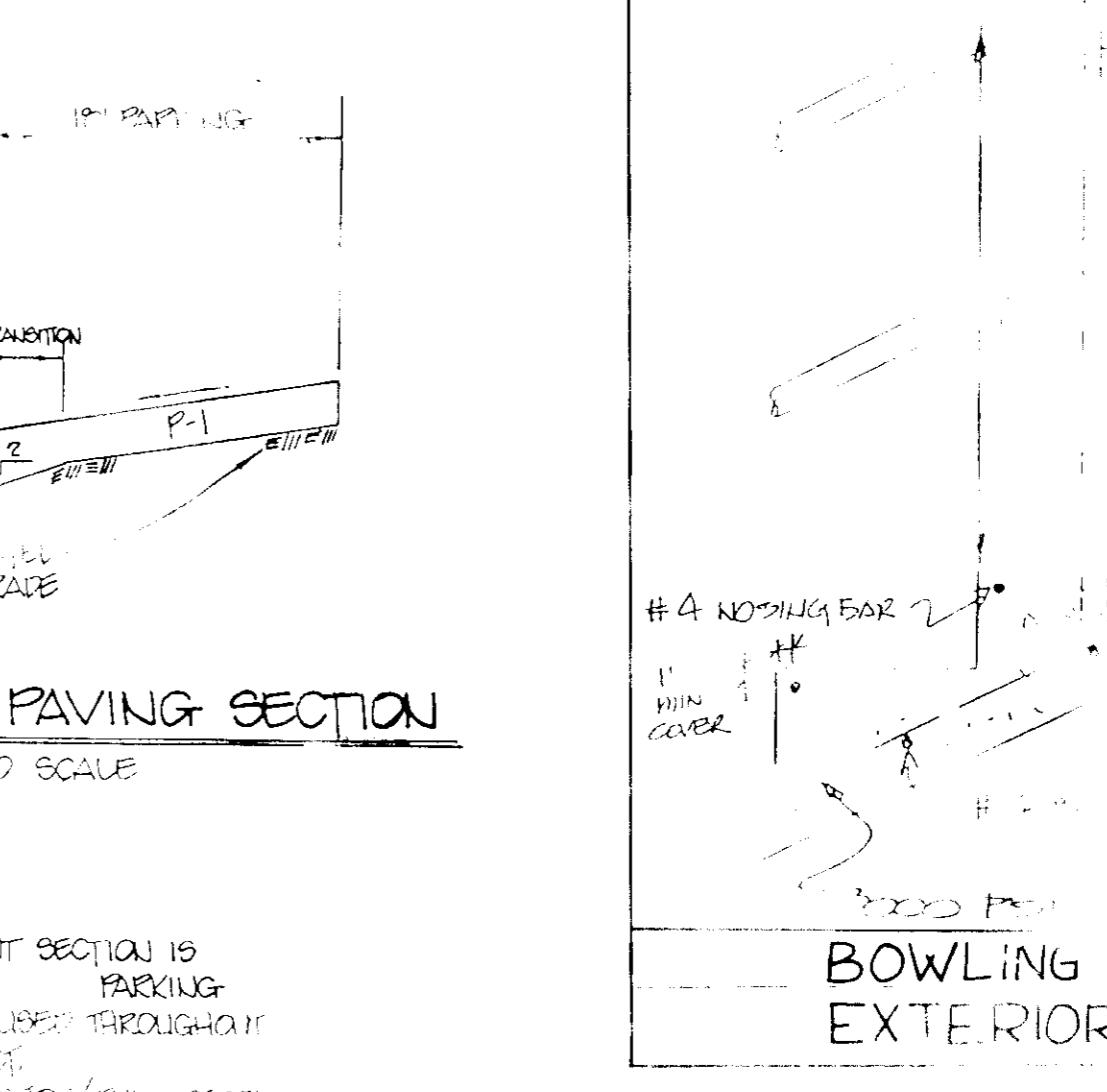
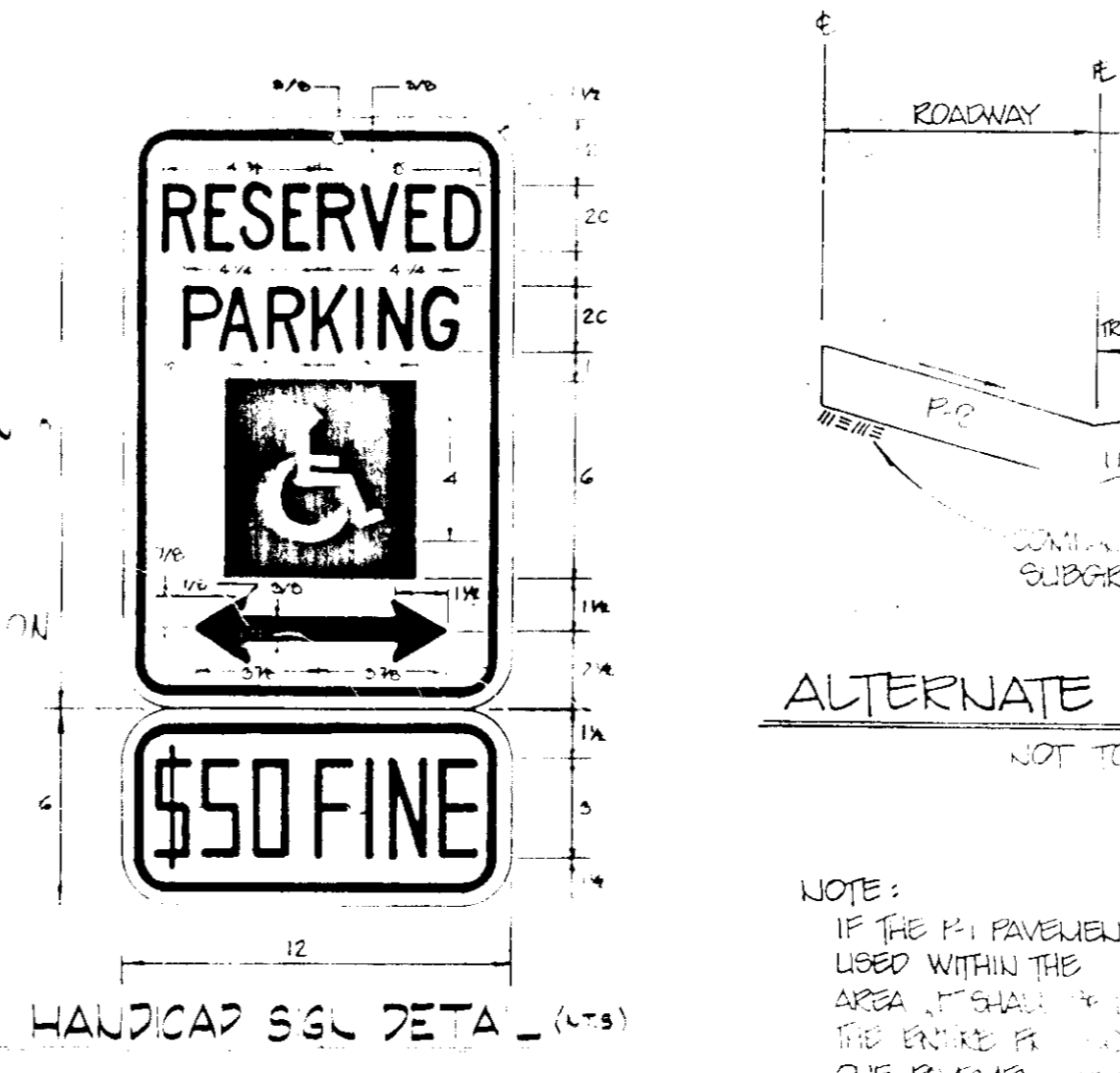
SECTION NUMBER	ROAD AND TRAIL CLASSIFICATION	PAVEMENT MATERIALS
P-1	PARKING AREAS AND TRAVELWAYS APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO HEAVY TRUCKS	1" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-2	RESIDENTIAL ZONES LOCAL COL. OF SAC STS ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL PARKING AREAS INDUSTRIAL ZONES WITH NO HEAVY TRUCKS PER DAY	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE

HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS  
 APPROVED: [Signature] Chief, Bureau of Engineering

PAYING SECTIONS P-1 THROUGH P-4



NOTE: SIGN CONSTRUCTION & INSTALLATION SHALL BE IN ACCORDANCE W/ THE HOWARD COUNTY COUNCIL BILL #58-84



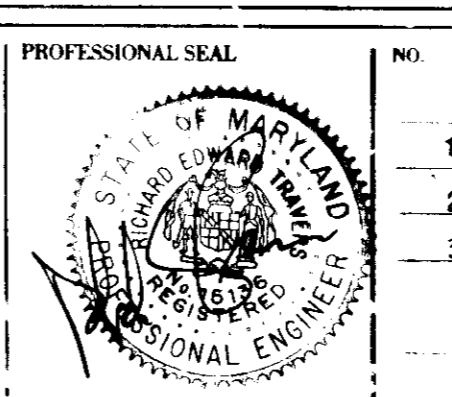
Peters, Harris, Reed & Associates, Inc.  
 Engineers, Surveyors, Planners, Landscape Architects  
 2600 Sandhill Place  
 Rockville, Maryland 20855  
 301-582-7229

Offices:  
 Fairfax, VA  
 Bridgewater, VA  
 Leesburg, VA  
 Rockville, MD  
 Virginia Beach, VA

CLIENT  
 OWNER/DEVELOPER  
 GORMAN ROAD LIMITED PARTNERSHIP  
 C/O JAMES F. KNOTT DEVELOPMENT CORPORATION  
 110 WEST ROAD, SUITE 203  
 TOWSON, MARYLAND 21284  
 (301) 321-6436

JOB  
**BOWLING BROOK FARMS**  
 PARCEL M - APARTMENTS  
 A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
 SIXTH ELECTION DISTRICT  
 TAX MAP 47 PARCEL 141  
 L.1394 F.623

TITLE  
**DETAIL SHEET**

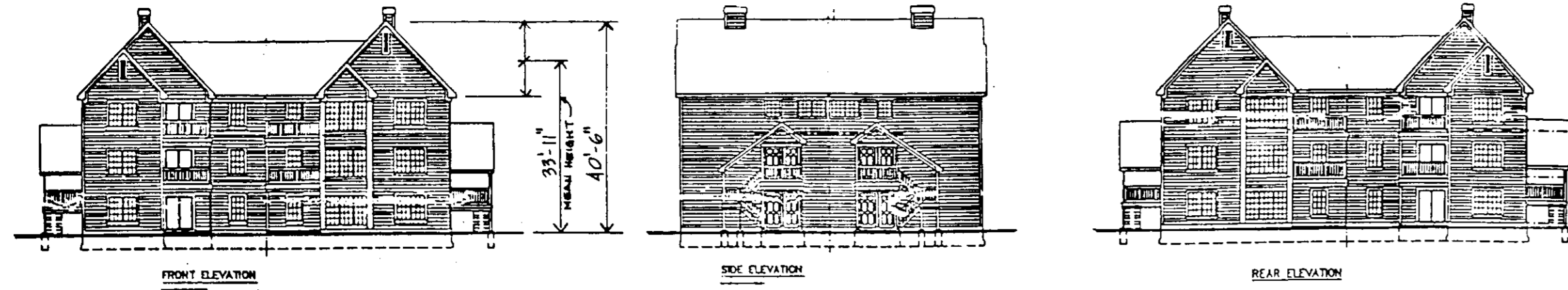


PROFESSIONAL SEAL NO. 10000

NO.	REVISIONS	DATE
1	ISSUED TO HOWARD COUNTY	2-26-89
2	ISSUED TO HOWARD COUNTY FOR 2ND REVIEW	4-17-89
2	ISSUED TO HO. CO. FOR SIGNATURE	6/22/89

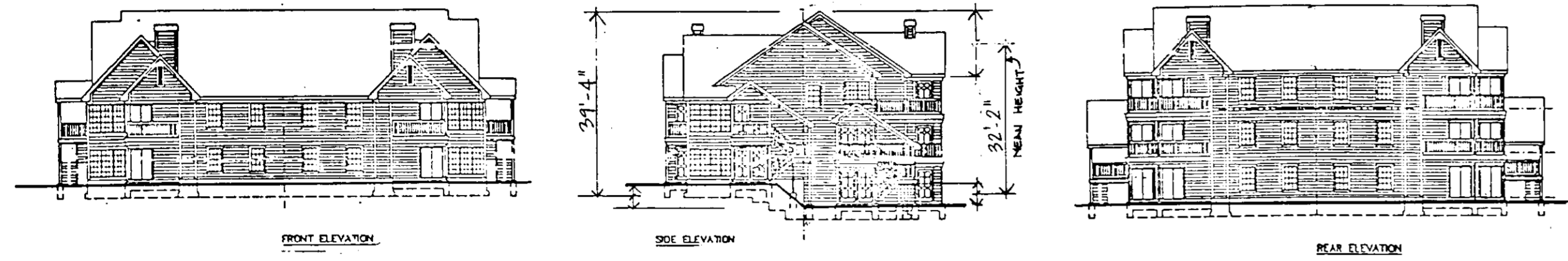
SURVEY BY  
 M.J.K.  
 M.F.C.  
 AS SHOWN  
 7 16

A UNIT TYPE



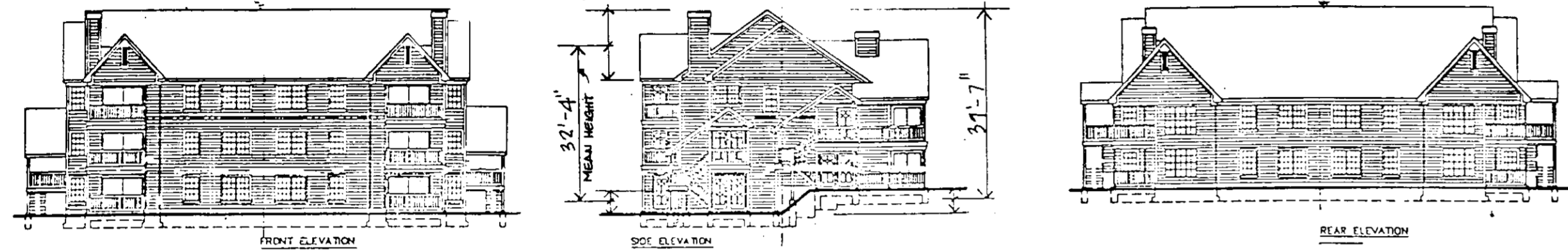
BUILDING NUMBERS 3, 6, 7, 12, 14

B UNIT TYPE

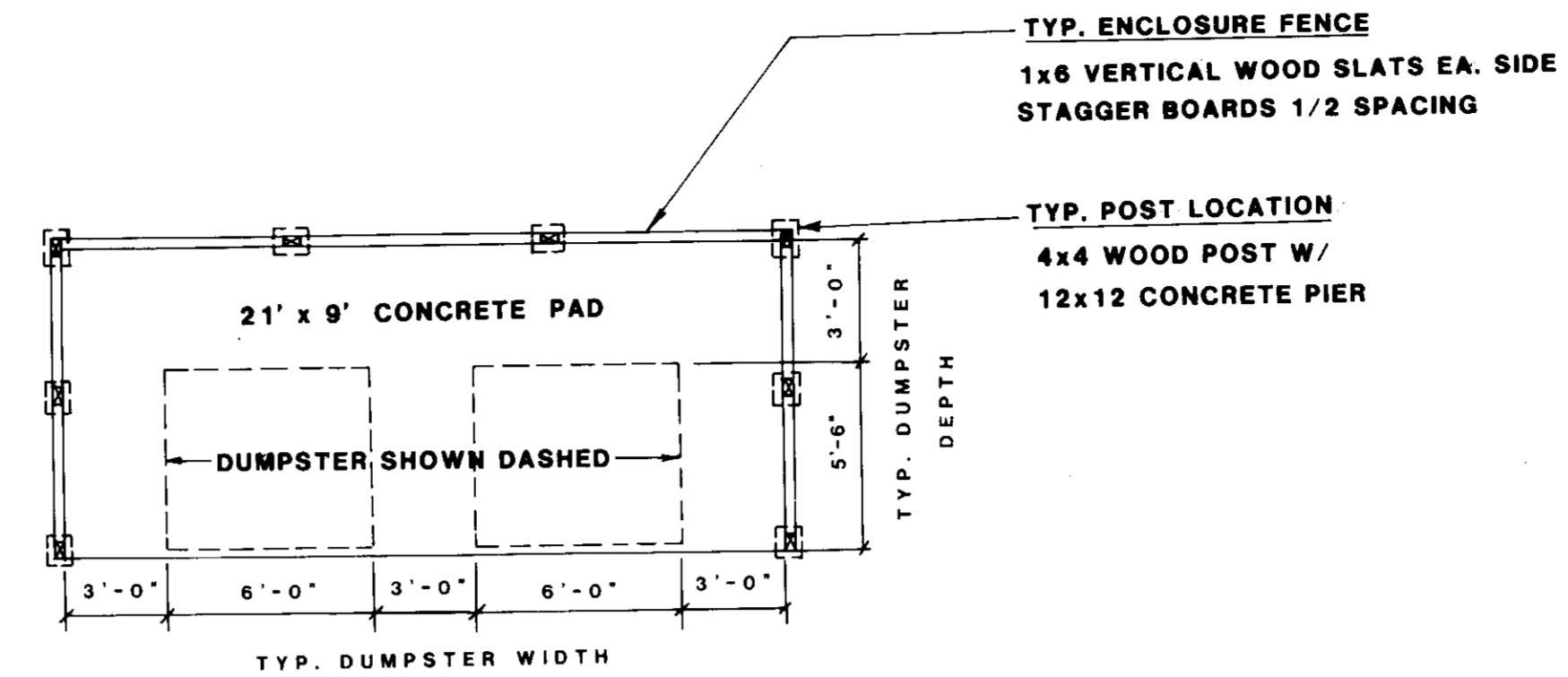


BUILDING NUMBERS 8, 9, 10, 13

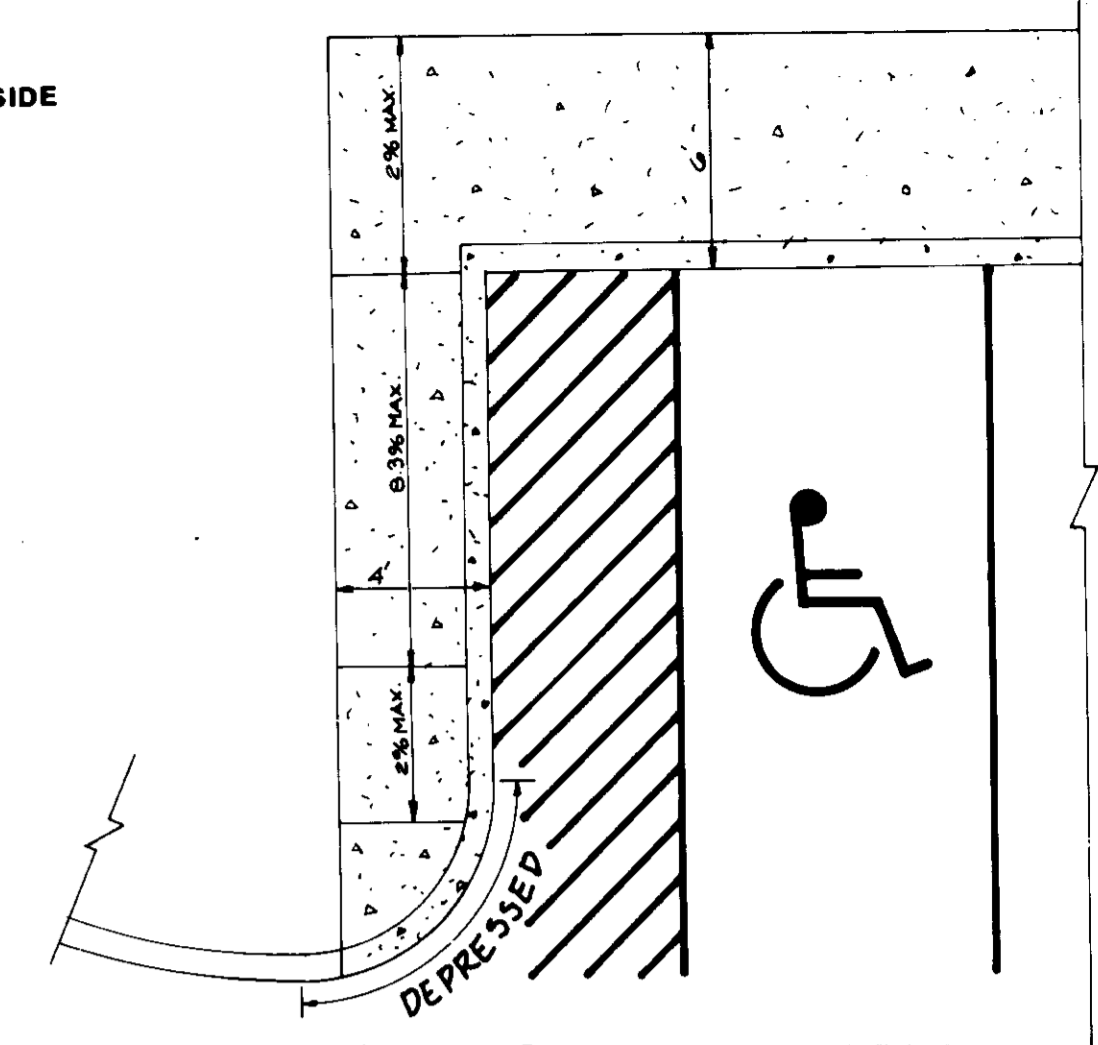
C UNIT TYPE



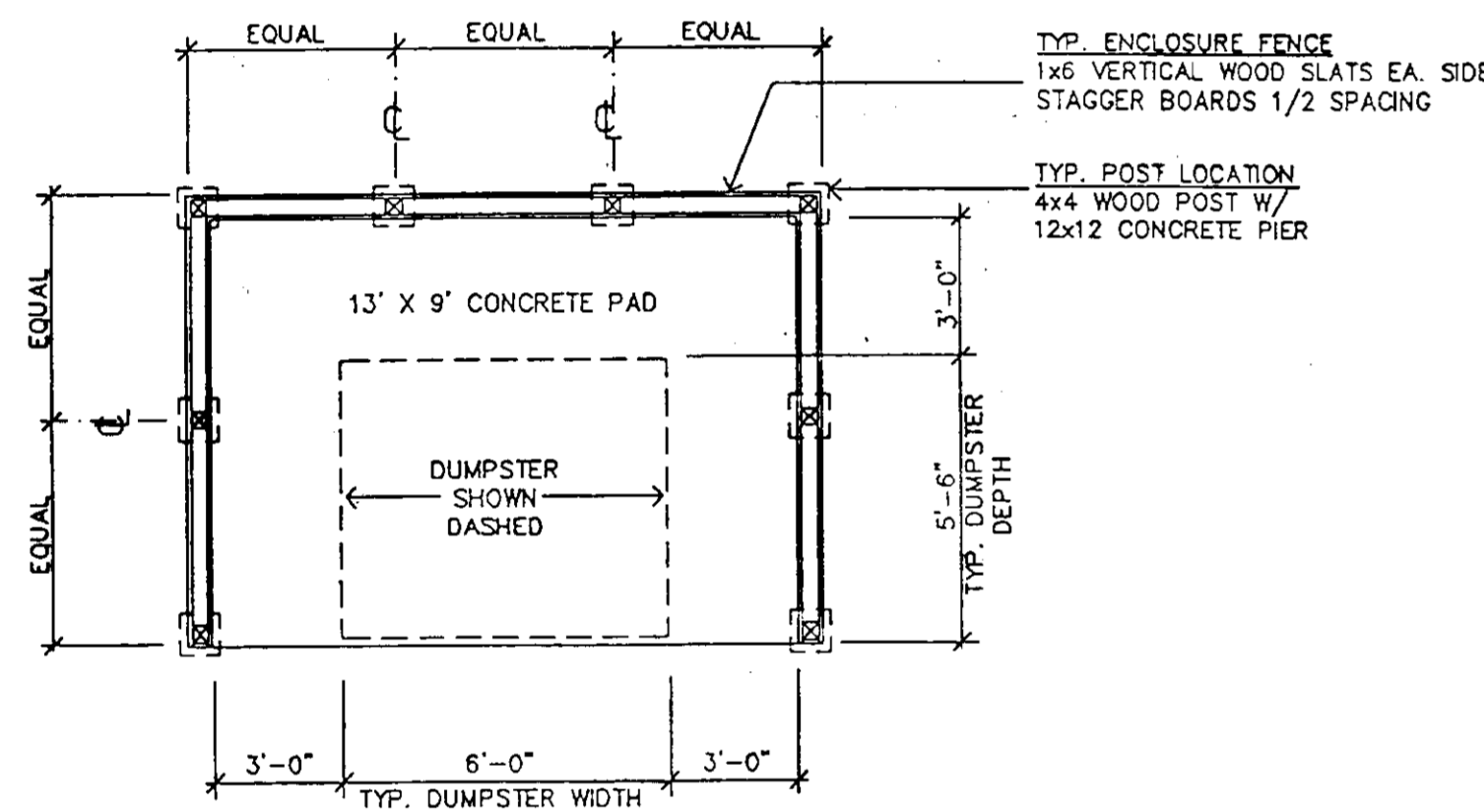
BUILDING NUMBERS 1, 2, 4, 5, 11



TRASH ENCLOSURE DETAIL FOR DUMPSTER NEXT TO BUILDING No. 12 NOT TO SCALE



HANDICAP RAMP DETAIL \* SEE SHEET 2 FOR LOCATION. NOT TO SCALE



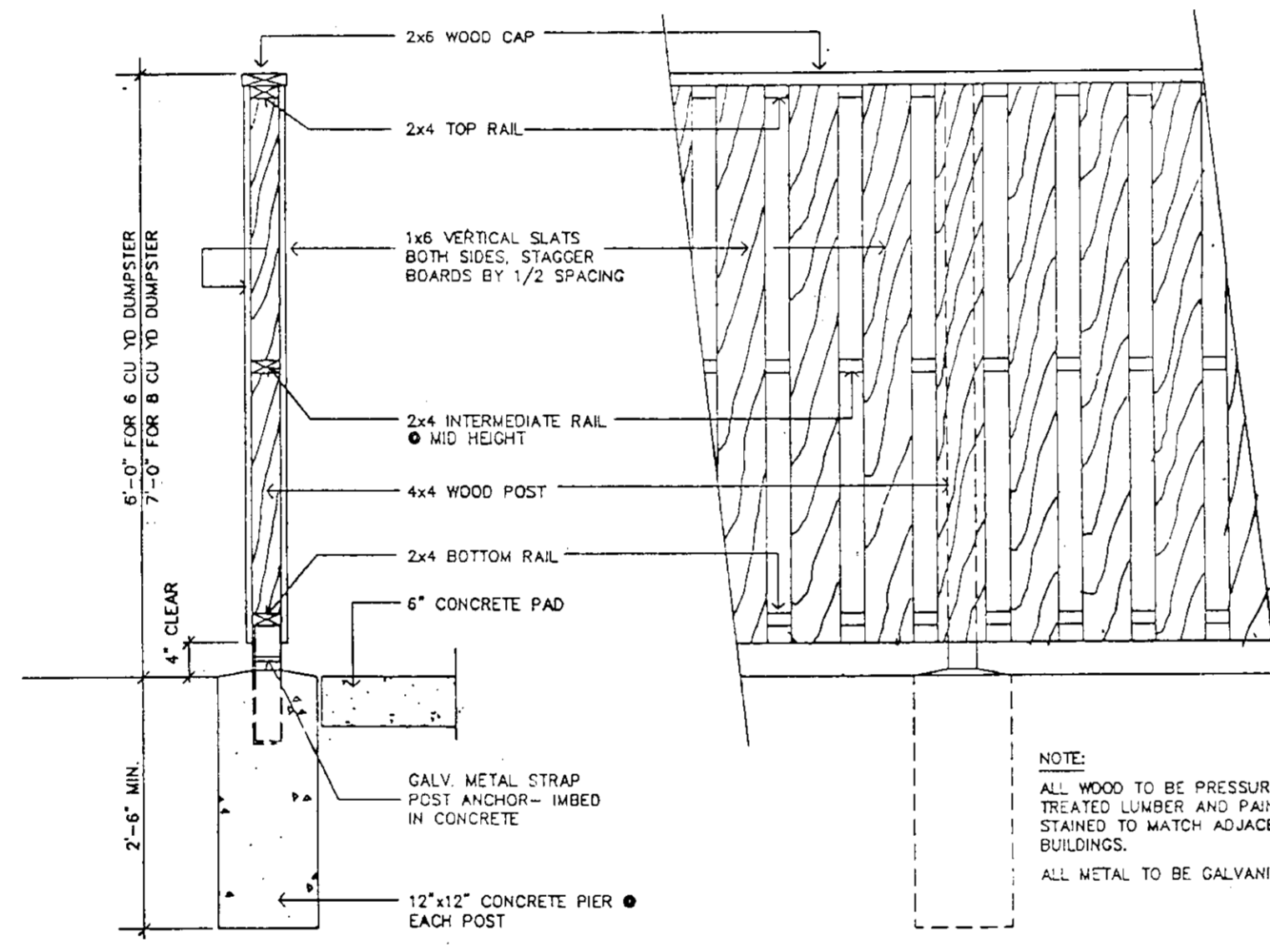
TRASH ENCLOSURE PLAN SCALE 1/4" = 1'-0"

TYP. ENCLOSURE FENCE 1x6 VERTICAL WOOD SLATS EA. SIDE STAGGER BOARDS 1/2 SPACING

TYP. POST LOCATION 4x4 WOOD POST W/ 12x12 CONCRETE PIER

8 CU. YD. DUMPSTER SIDE DOOR ACCESS 72" WIDE 66" DEPTH 80" HEIGHT

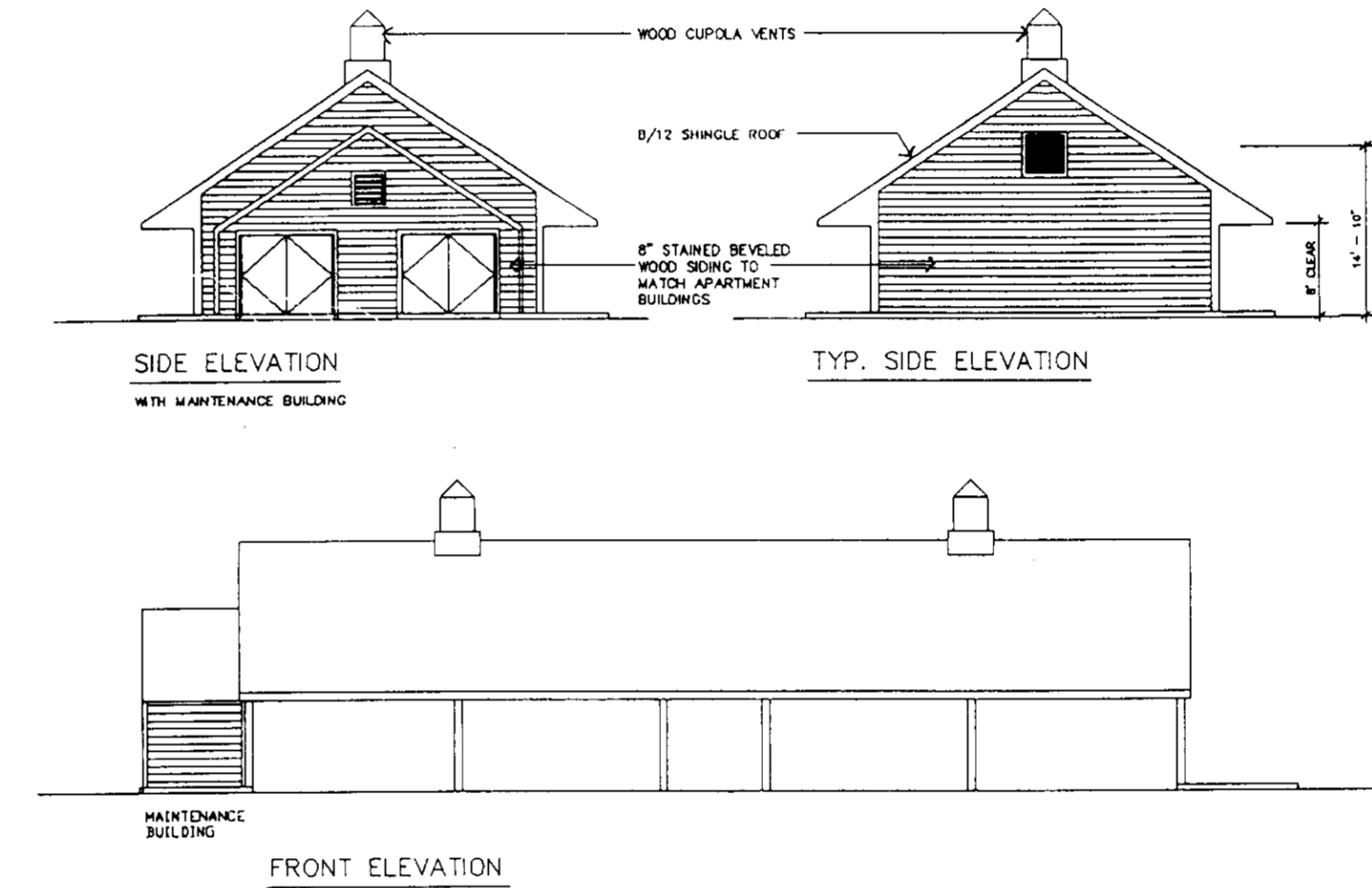
6 CU. YD. DUMPSTER TOP LID ACCESS 72" WIDE 66" DEPTH 60" HEIGHT



SECTION DETAIL SCALE 3/4" = 1'-0"

ELEVATION DETAIL SCALE 3/4" = 1'-0"

NOTE: ALL WOOD TO BE PRESSURE TREATED LUMBER AND PAINTED/STAINED TO MATCH ADJACENT BUILDINGS. ALL METAL TO BE GALVANIZED



PROPOSED CARPORT DESIGN

Approval stamps from Howard County Health Department, Office of Planning & Zoning, and Department of Public Works. Includes dates and signatures for various officials.

PHR&A logo

Patton Harris-Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects 7609 Sandhill Place Rockville, Maryland 20855 301 762-2220

Office: Fairfax, VA Bridgewater, VA Loudoun, VA Rockville, MD Virginia Beach, VA

CLIENT: GORMAN ROAD LIMITED PARTNERSHIP C/O JAMES F. KNOPT DEVELOPMENT CORPORATION 110 WEST ROAD, SUITE 203 TOMSON, MARYLAND 21204 (301) 321-6436

JOB: BOWLING BROOK FARMS PARCEL M - APARTMENTS A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS SIXTH ELECTION DISTRICT TAX MAP 47 PARCEL 141 L.1394 F.632

TITLE: DETAIL SHEET

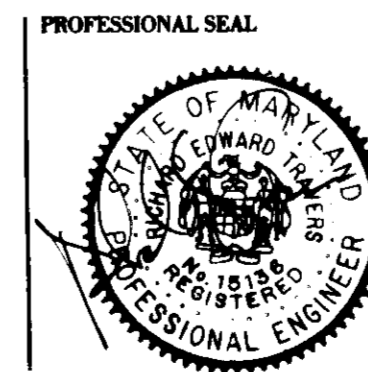
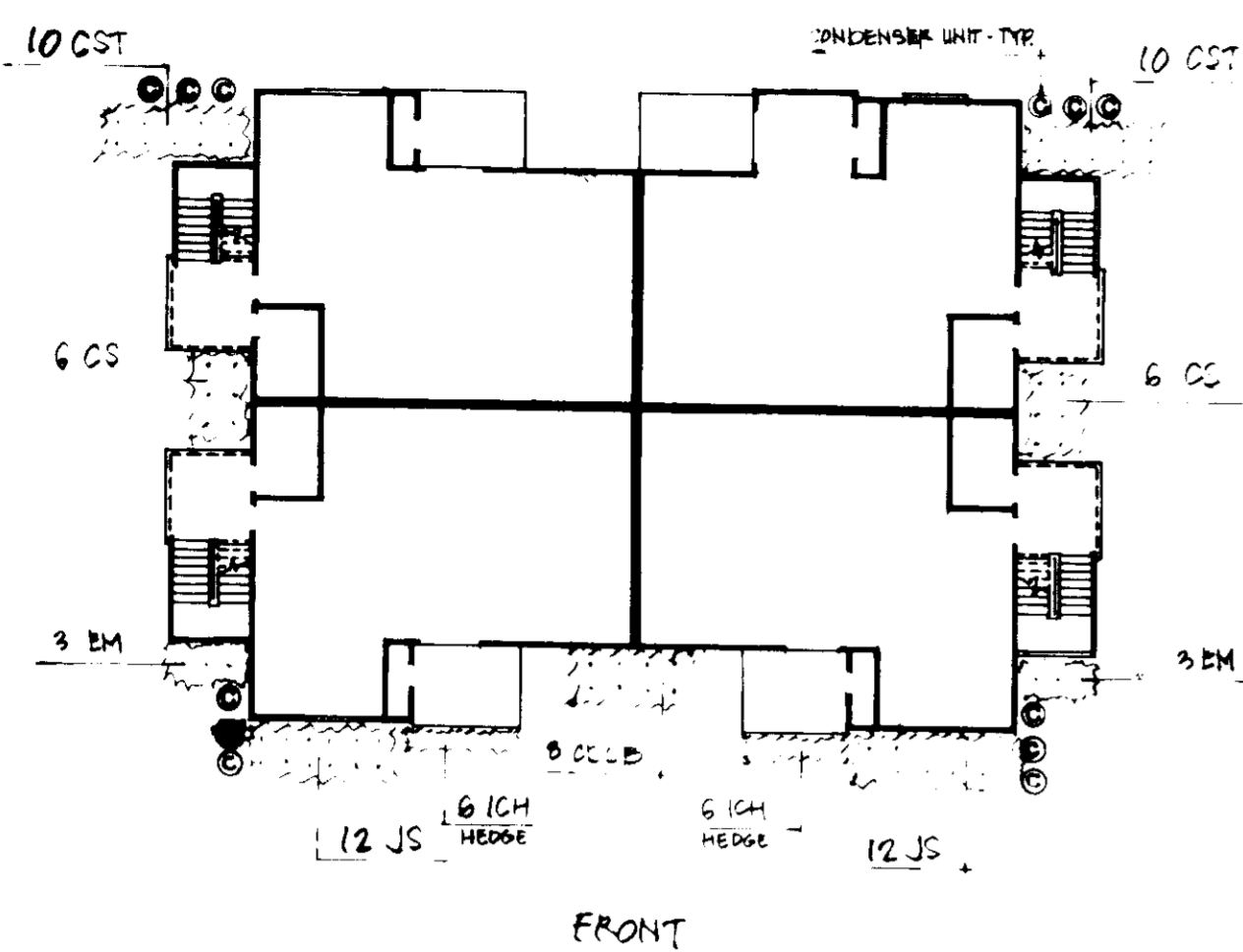


Table with columns: NO., REVISIONS, DATE, BY, SURVEY BY, FILE NO. Includes revision history and design/drawn information.

SDP-84-170

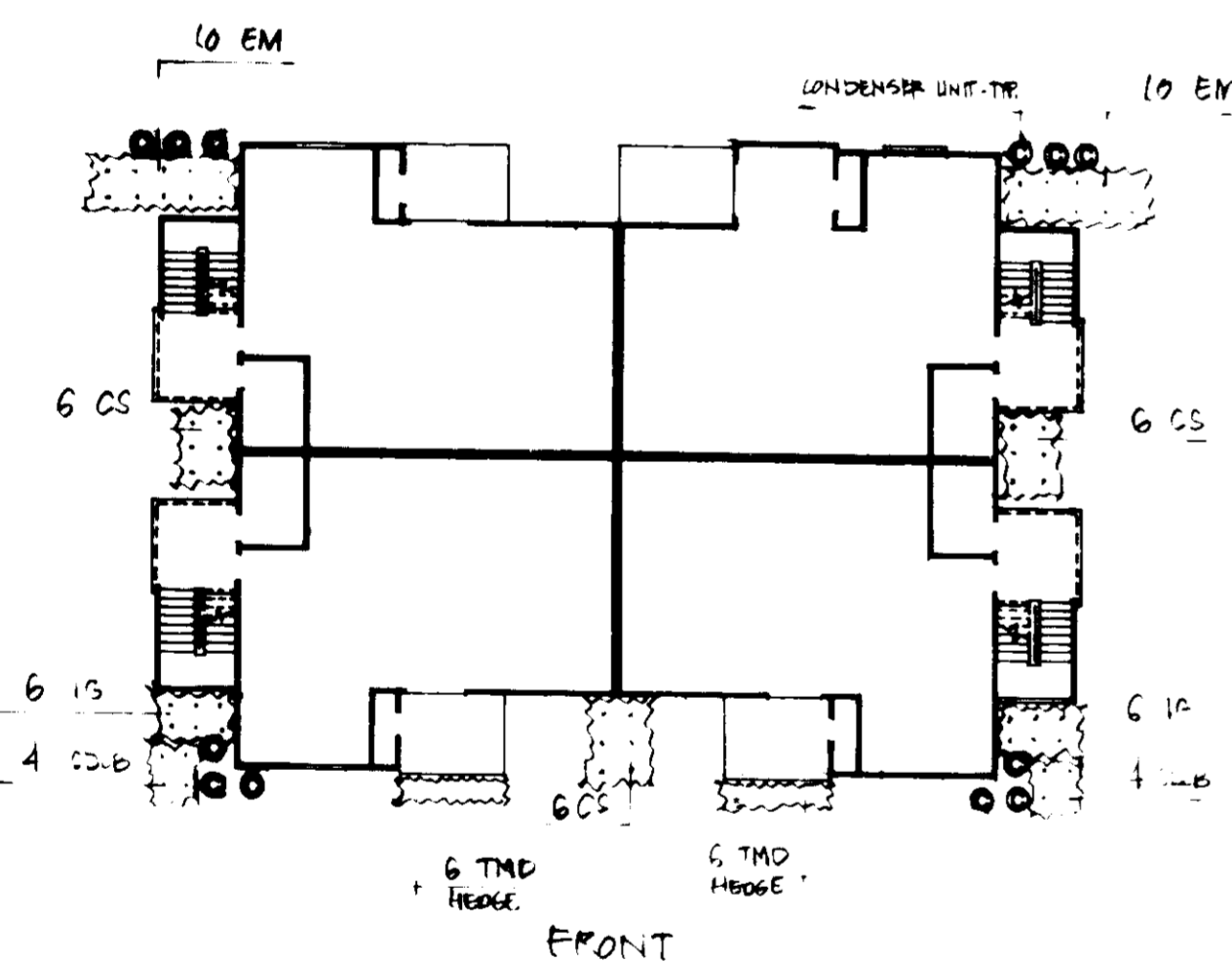




**Plant List** FOR BLDGS FACING E-SE-S-SH

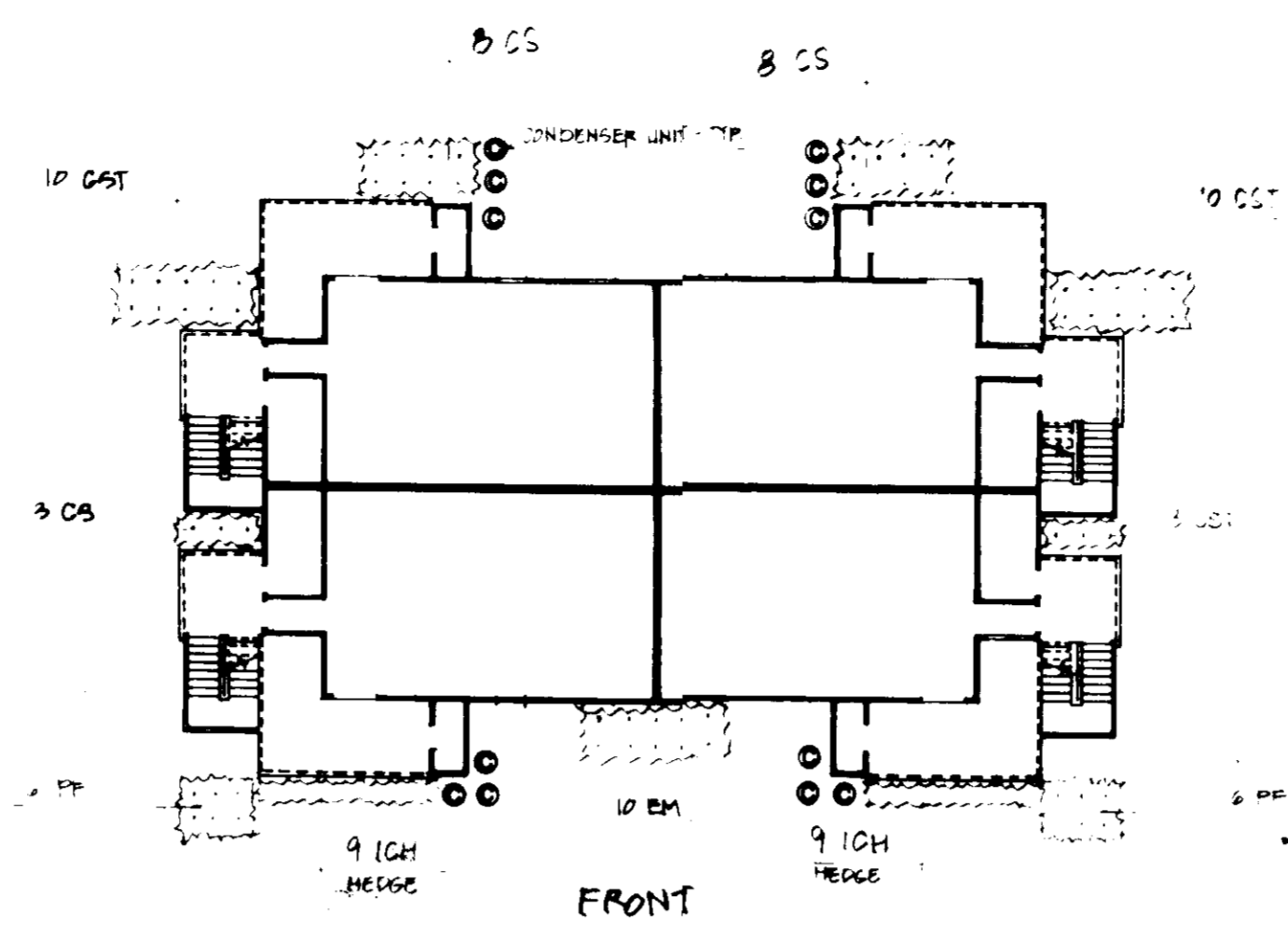
KEY	QTY	BOTANICAL / COMMON NAME	SIZE / CONC
OST	10	OSTIA STRUTTERA / REDOUBT DOGWOOD	1" X 1/2" 20' E-B
COB	8	COTONEASTER DAMPNI / CORAL BERRY / CORAL BERRY / CORNEASTER	2" X 1/2" 20' E-B
CS	12	COTONEASTER MALLINOVA / REPAIRS / WILLOW LEAF / CORNEASTER	2" X 1/2" 20' E-B
EM	6	ERYTHRUS ALTISSIMUS / MANHATTAN / MANHATTAN ERYTHRUS	2" X 1/2" 20' E-B
ICH	12	ILEX CORNATA / HEBEL / HETE HOLY	2" X 1/2" 20' E-B
IB	12	ILEX GLABRA / HEBERRY	2" X 1/2" 20' E-B
TMD	18	TAXUS MEDIA / CHESTNUT / SPREADING YEW	2" X 1/2" 20' E-B
JP	24	JUNIPERUS CHINENSIS / SARGENT / SARGENT JUNIPER	1/8" X 1/2" 20' E-B

**Unit Types A-1 & A-2**



**Plant List** FOR BLDGS FACING W-NW-N-E

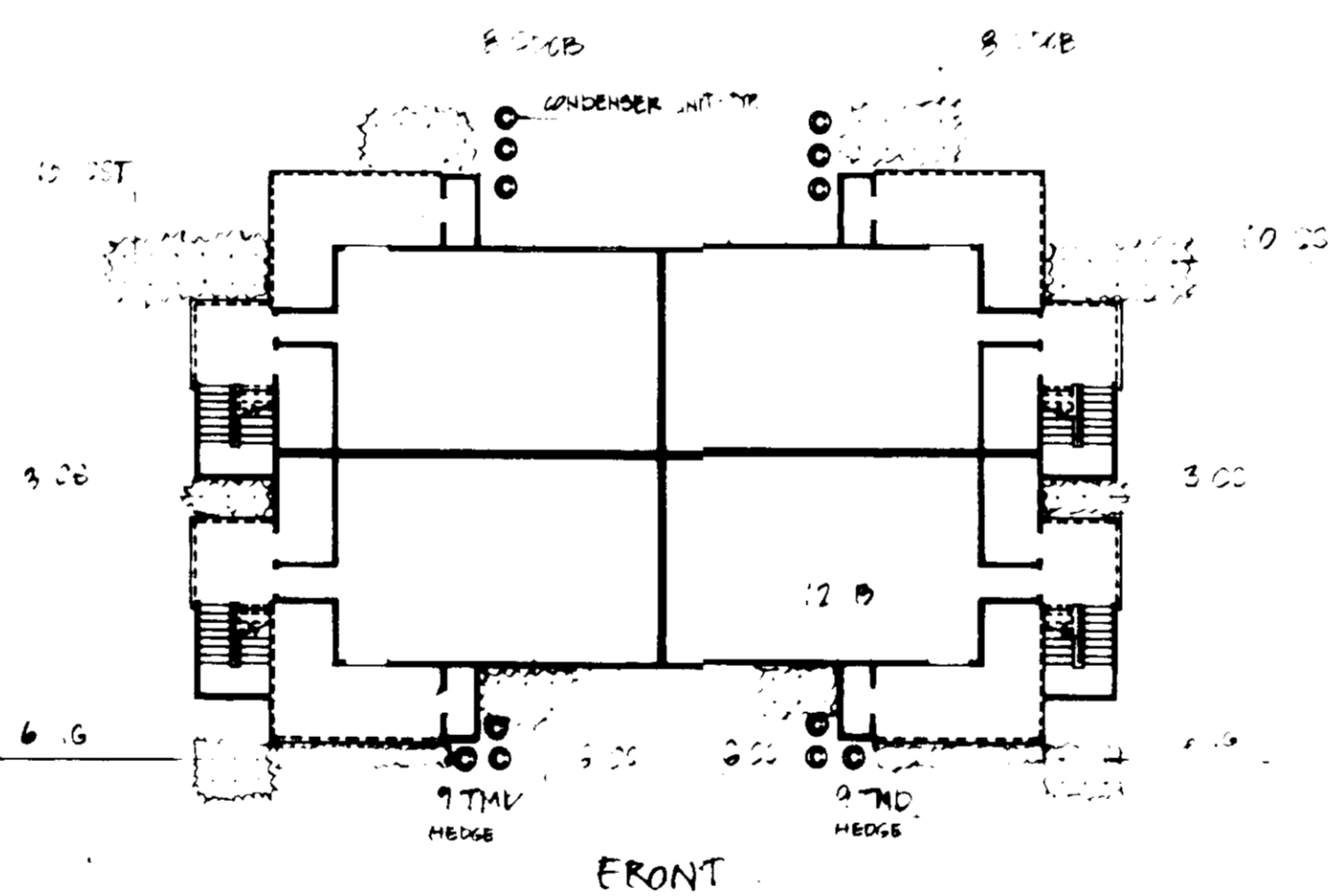
KEY	QTY	BOTANICAL / COMMON NAME	SIZE / CONC
OST	10	OSTIA STRUTTERA / REDOUBT DOGWOOD	1" X 1/2" 20' E-B
COB	8	COTONEASTER DAMPNI / CORAL BERRY / CORAL BERRY / CORNEASTER	2" X 1/2" 20' E-B
CS	12	COTONEASTER MALLINOVA / REPAIRS / WILLOW LEAF / CORNEASTER	2" X 1/2" 20' E-B
EM	20	ERYTHRUS ALTISSIMUS / MANHATTAN / MANHATTAN ERYTHRUS	2" X 1/2" 20' E-B
ICH	12	ILEX CORNATA / HEBEL / HETE HOLY	2" X 1/2" 20' E-B
IB	12	ILEX GLABRA / HEBERRY	2" X 1/2" 20' E-B
TMD	12	TAXUS MEDIA / CHESTNUT / SPREADING YEW	2" X 1/2" 20' E-B



**Plant List** FOR BLDGS FACING E-SE-S-SH

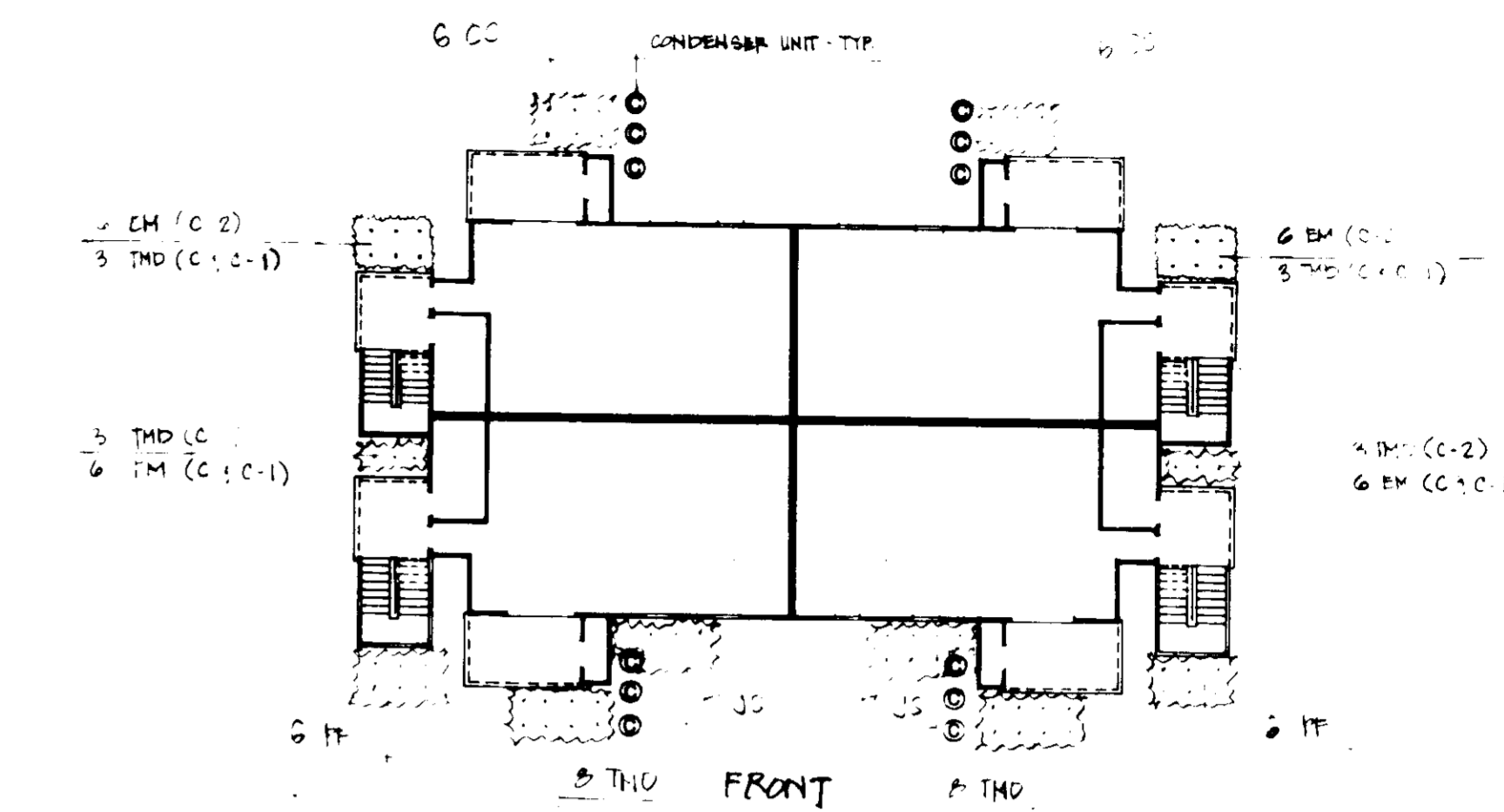
KEY	QTY	BOTANICAL / COMMON NAME	SIZE / CONC
OST	20	OSTIA STRUTTERA / REDOUBT DOGWOOD	1" X 1/2" 20' E-B
COB	8	COTONEASTER DAMPNI / CORAL BERRY / CORAL BERRY / CORNEASTER	2" X 1/2" 20' E-B
CS	12	COTONEASTER MALLINOVA / REPAIRS / WILLOW LEAF / CORNEASTER	2" X 1/2" 20' E-B
EM	12	ERYTHRUS ALTISSIMUS / MANHATTAN / MANHATTAN ERYTHRUS	2" X 1/2" 20' E-B
ICH	12	ILEX CORNATA / HEBEL / HETE HOLY	2" X 1/2" 20' E-B
IB	12	ILEX GLABRA / HEBERRY	2" X 1/2" 20' E-B
TMD	18	TAXUS MEDIA / CHESTNUT / SPREADING YEW	2" X 1/2" 20' E-B
JP	12	JUNIPERUS FRASERI / RED PINE	2" X 1/2" 20' E-B

**Unit Type B**



**Plant List** FOR BLDGS FACING W-NW-N-E

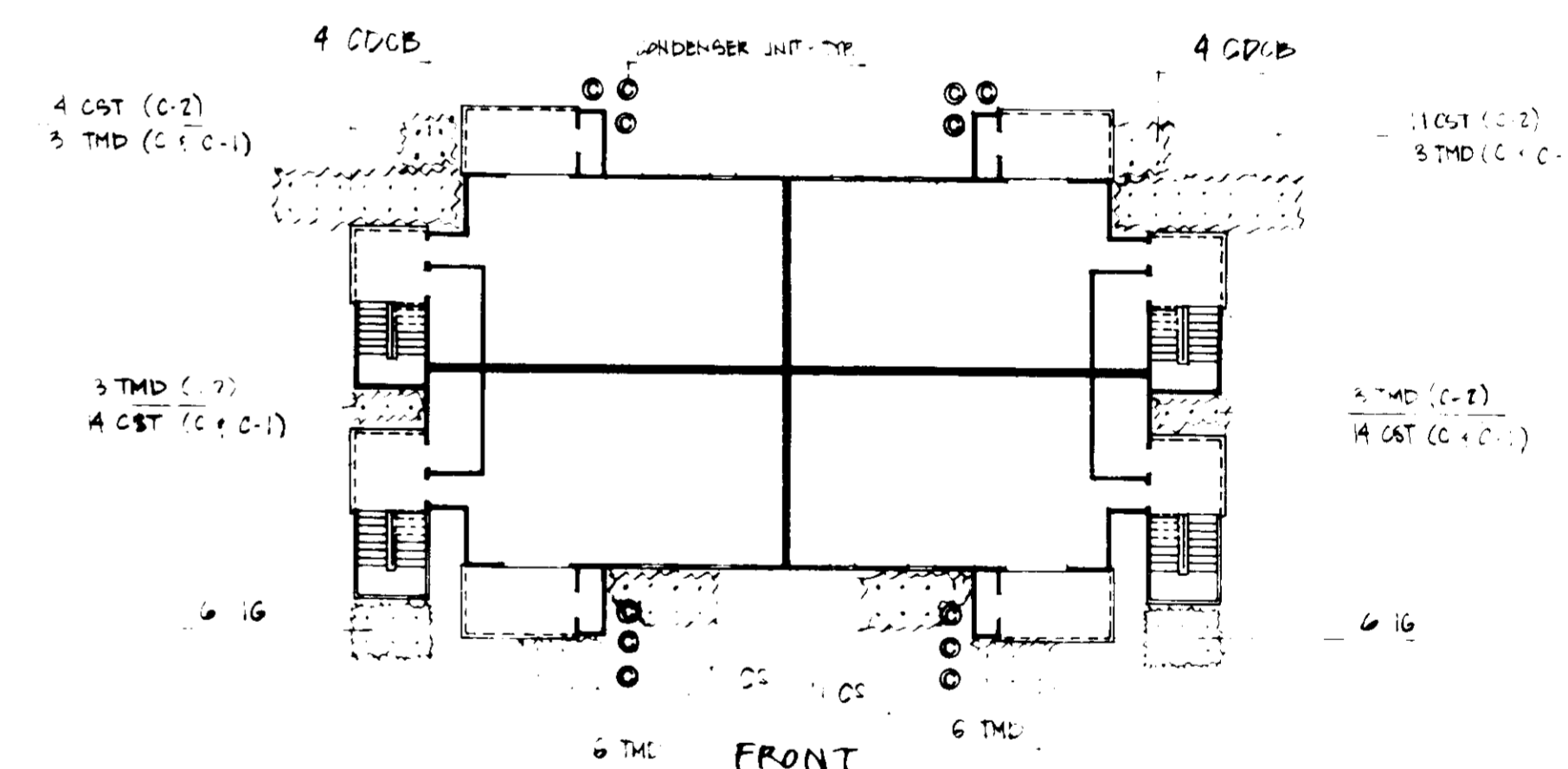
KEY	QTY	BOTANICAL / COMMON NAME	SIZE / CONC
OST	20	OSTIA STRUTTERA / REDOUBT DOGWOOD	1" X 1/2" 20' E-B
COB	8	COTONEASTER DAMPNI / CORAL BERRY / CORAL BERRY / CORNEASTER	2" X 1/2" 20' E-B
CS	12	COTONEASTER MALLINOVA / REPAIRS / WILLOW LEAF / CORNEASTER	2" X 1/2" 20' E-B
EM	12	ERYTHRUS ALTISSIMUS / MANHATTAN / MANHATTAN ERYTHRUS	2" X 1/2" 20' E-B
ICH	12	ILEX CORNATA / HEBEL / HETE HOLY	2" X 1/2" 20' E-B
IB	12	ILEX GLABRA / HEBERRY	2" X 1/2" 20' E-B
TMD	18	TAXUS MEDIA / CHESTNUT / SPREADING YEW	2" X 1/2" 20' E-B



**Plant List** FOR BLDGS FACING E-SE-S-SH

KEY	QTY	BOTANICAL / COMMON NAME	SIZE / CONC
OST	8	OSTIA STRUTTERA / REDOUBT DOGWOOD	1" X 1/2" 20' E-B
COB	8	COTONEASTER DAMPNI / CORAL BERRY / CORAL BERRY / CORNEASTER	2" X 1/2" 20' E-B
CS	12	COTONEASTER MALLINOVA / REPAIRS / WILLOW LEAF / CORNEASTER	2" X 1/2" 20' E-B
EM	12	ERYTHRUS ALTISSIMUS / MANHATTAN / MANHATTAN ERYTHRUS	2" X 1/2" 20' E-B
ICH	12	ILEX CORNATA / HEBEL / HETE HOLY	2" X 1/2" 20' E-B
IB	12	ILEX GLABRA / HEBERRY	2" X 1/2" 20' E-B
TMD	18	TAXUS MEDIA / CHESTNUT / SPREADING YEW	2" X 1/2" 20' E-B
JP	8	JUNIPERUS FRASERI / RED PINE	2" X 1/2" 20' E-B

**Unit Types C, C-1, & C-2**



**Plant List** FOR BLDGS FACING W-NW-N-E

KEY	QTY	BOTANICAL / COMMON NAME	SIZE / CONC
OST	10	OSTIA STRUTTERA / REDOUBT DOGWOOD	1" X 1/2" 20' E-B
COB	8	COTONEASTER DAMPNI / CORAL BERRY / CORAL BERRY / CORNEASTER	2" X 1/2" 20' E-B
CS	12	COTONEASTER MALLINOVA / REPAIRS / WILLOW LEAF / CORNEASTER	2" X 1/2" 20' E-B
EM	12	ERYTHRUS ALTISSIMUS / MANHATTAN / MANHATTAN ERYTHRUS	2" X 1/2" 20' E-B
ICH	12	ILEX CORNATA / HEBEL / HETE HOLY	2" X 1/2" 20' E-B
IB	12	ILEX GLABRA / HEBERRY	2" X 1/2" 20' E-B
TMD	18	TAXUS MEDIA / CHESTNUT / SPREADING YEW	2" X 1/2" 20' E-B

APPROVED  
6-9-89  
LKS

HOWARD COUNTY APPROVAL

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: [Signature] DATE: 6-19-89

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

DIRECTOR: [Signature] DATE: 2/17/89

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: [Signature] DATE: 2/23/89

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

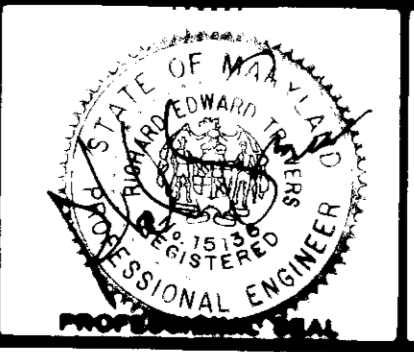
DIRECTOR: [Signature] DATE: 2/13/89

CHIEF BUREAU OF ENGINEERING: [Signature] DATE: 7-18-89

OWNER/DEVELOPER  
GORMAN ROAD LIMITED PARTNERSHIP  
C/O JAMES P. BOYDE DEVELOPMENT CORPORATION  
110 WEST BELL, SUITE 303  
TOWSON, MARYLAND, 21284  
(301) 321-6436

NO.	DESCRIPTION	DATE	BY	APPROVED	DATE
1	ISSUED TO HOWARD COUNTY	2-28-89			
2	ISSUED TO MD.CO. FOR END REVIEW	4-17-89			
3	ISSUED TO MD.CO. FOR PERMITS	6-18-89			

REVISION APPROVED BY



**LANDSCAPE PLAN**

**Patton Harris Rust and Associates**  
A Professional Corporation  
Engineers, Surveyors, Planners and Landscape Architects  
Fairfax, Va./Bridgewater, Va./Leesburg, Va./Rockville, Md./Tidewater, Va.

**BOWLING BROOK FARMS**  
**PARCEL M - APARTMENTS**  
A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
SIXTH ELECTION DISTRICT  
TAX MAP 47 PARCEL 141  
L.1394 F.632

SURVEY	CHK	DATE
1	1	7-22-89
2	2	8-1-89
3	3	8-1-89
4	4	8-1-89

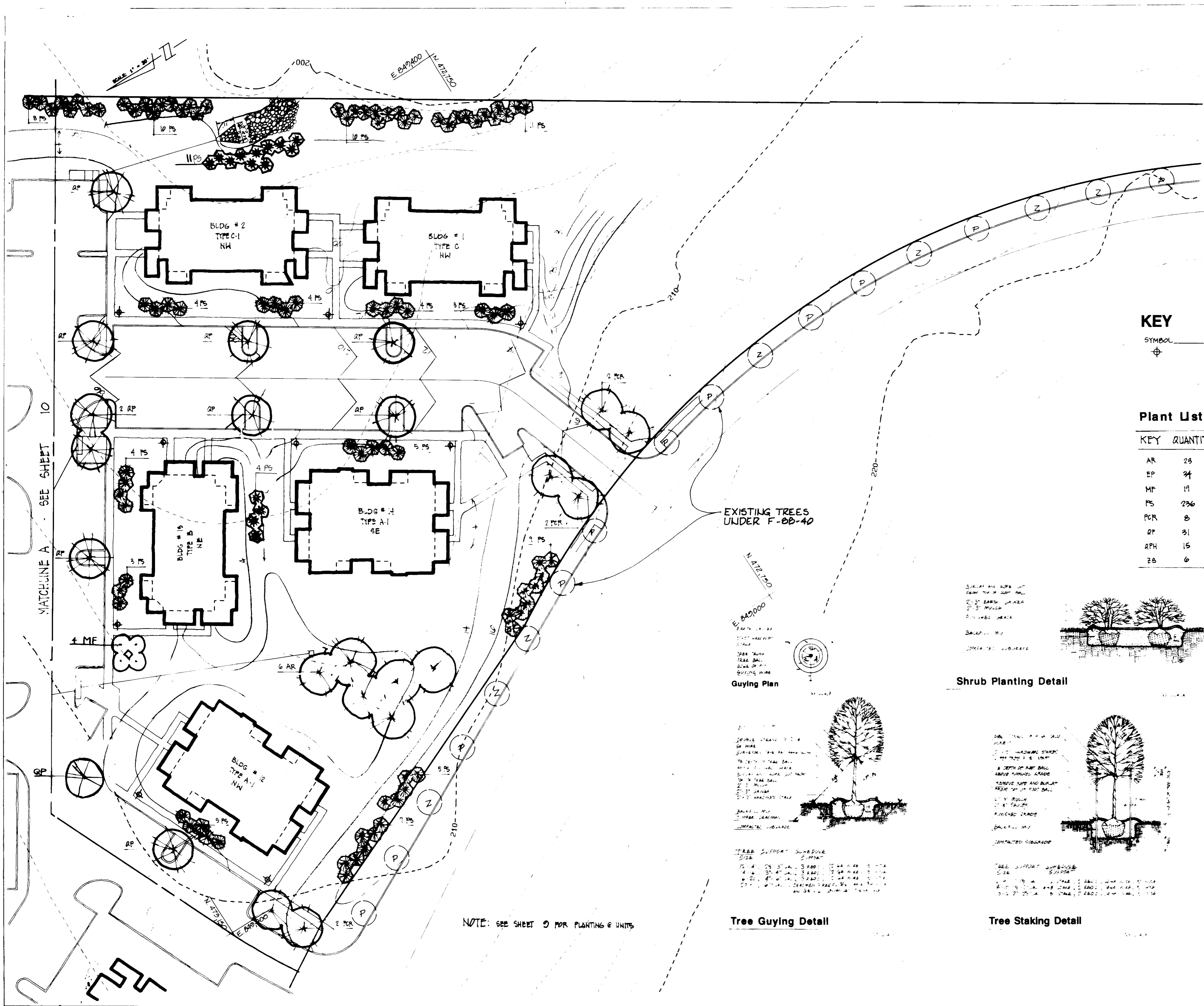
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DRAWN: CEL  
CHECKED: [Signature]  
SCALE: 1" = 20'  
CL

BHEET: 9 OF 16  
FILE NO: 2184-1-13

**KILDUFF NAGY - LANDSCAPE ARCHITECTS**  
10776 Baltimore Avenue, Beltsville, MD 20705  
(301) 595-4955  
Landscape Architecture Park and Recreation Planning

NOTE: SEE SHEET NO. 11 FOR PLANTING DETAILS AND PLANTING NOTES.





**APPROVED:** FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER: [Signature] DATE: 7/9/89  
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 DIRECTOR: [Signature] DATE: 8/12/89  
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: [Signature] DATE: 7/27/89  
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR: [Signature] DATE: 7/13/89  
 CHIEF BUREAU OF ENGINEERING: [Signature] DATE: 7/13/89

DATE: 6-9-89  
 LWS

HOWARD COUNTY APPROVAL

**KEY**

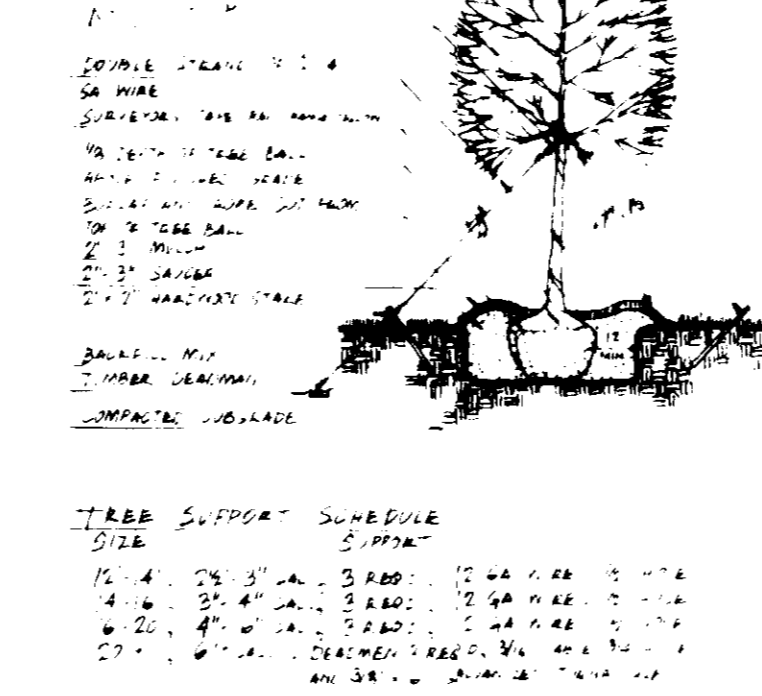
SYMBOL	DESCRIPTION
⊕	TRADITIONAL COLONIAL LIGHT FIXTURE ON A 6" SQUARE WOOD POLE (12' HT) AS PER D.G.4E.

**Plant List** (DOES NOT INCLUDE PLANT MATERIALS & UNITS - SEE SHEET 9)

KEY	QUANTITY	BOTANICAL/COMMON NAME	SIZE - CONDITION	REMARKS
AR	23	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	2'-2 1/2" CAL, 14'-16" B: B	
EP	34	EUONYMUS KIANTSCHOWICUS 'PAULI' / PAULI EUONYMUS	30"-36" HT. B: B	3-3-0-0-0
MF	14	MALUS FLORIBUNDA / JAPANESE FLOWERING CRABAPPLE	8'-10" HT. B: B	
PS	236	PINUS STROBUS / EASTERN WHITE PINE	6'-7" HT. B: B	3-5-0-0
PCR	8	MYRUS CALLENTANA 'BRADFORD' / BRADFORD PEAR	1 1/4"-1 1/2" CAL, 8'-10" B: B	
QP	31	QUERCUS PALUSTRIS / PIN OAK	3'-3 1/2" CAL, 14'-16" B: B	
QPH	15	QUERCUS PHellos / WILLOW OAK	3'-3 1/2" CAL, 14'-16" B: B	
ZS	6	ZELKOVA SERRATA 'VILLAGE GREEN' / VILLAGE GREEN ZELKOVA	3'-3 1/2" CAL, 14'-16" B: B	

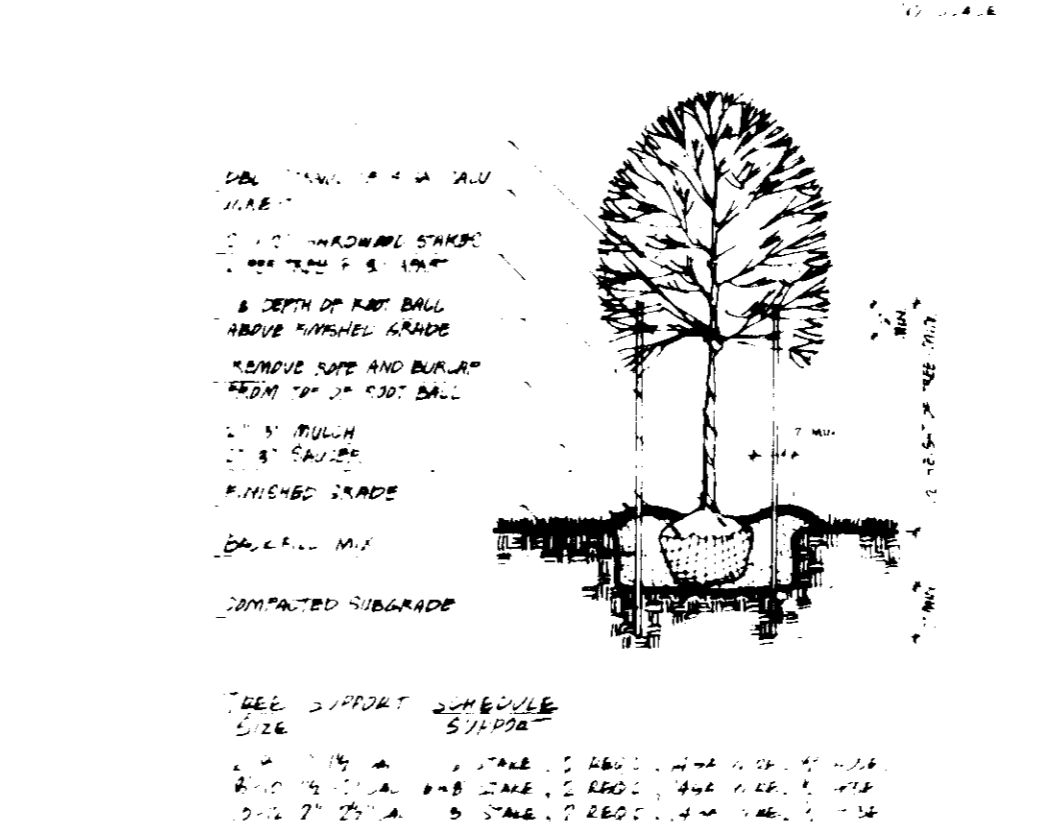
EXISTING TREES UNDER F-88-40

**Guying Plan**



**Tree Guying Detail**

**Shrub Planting Detail**



**Tree Staking Detail**

**Planting Notes**

- ALL PLANT MATERIALS INSTALLED SHALL BE FULLY HEAVY CONFORM TO A.A.N. SPECIFICATIONS AND BE INSTALLED IN CONFORMANCE WITH THE U.C.A.M.W. SPECS.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED OR MULCHED SHALL BE HYDROSEEDING WITH THE FOLLOWING SEED MIX:  
 95% TURF-TYPE TALL FESCUE (TRI-BLEND OF EQ. PARTS OF THREE OF THE FOLLOWING VARIETIES: ADVENTURE, FINELAWN I, MUSTANG, OLYMPIC OR REEL)  
 5% KENTUCKY BLUEGRASS (ADELPHI, SHOME OR KENBELLE)  
 SEED @ A RATE OF 250 - 350 LBS/ACRE
- SOD COMPOSITION SHALL BE COMPARABLE TO TURF WHICH WILL BE ESTABLISHED BY HYDROSEEDING OPERATIONS DESCRIBED ABOVE.
- ALL EXPOSED EARTH WITHIN THE LIMITS OF THE PLANTING BEDS SHALL BE MULCHED W/ SHREDDED HARDWOOD BARK MULCH AS PER DETAILS.
- ALL SHADE + ORNAMENTAL TREES SHALL BE MATCHED IN GROUPS.
- ANY PROPOSED SUBSTITUTIONS SHALL BE MADE PRIOR TO BIDDING.
- PLANT QUANTITIES SHOWN IN PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN THE QUANTITIES SHOWN ON THE PLAN + THOSE SHOWN IN THE PLANT LIST THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE AND THE QUANTITIES ON THE PLAN SHALL TAKE PRECEDENCE.
- THIS PLAN IS TO BE USED FOR PLANTING ONLY.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL SUBSURFACE UTILITIES PRIOR TO COMMENCING PLANTING OPERATIONS AND SHALL NOTIFY THE OWNER OF ANY CONFLICTS BETWEEN PROPOSED PLANT LOCATIONS AND UTILITIES.

NOTE: SEE SHEET 9 FOR PLANTING & UNITS



Patton Harris Rust & Associates, P.C.  
 Engineers, Surveyors, Planners, Landscape Architects  
 7600 Marshfield Place  
 Rockville, Maryland 20855  
 301-762-2220

Offices:  
 Fairfax, VA  
 Bridgewater, VA  
 Loudoun, VA  
 Rockville, MD  
 Virginia Beach, VA

CLIENT  
**OWNER/DEVELOPER**  
 GORMAN ROAD LIMITED PARTNERSHIP  
 C/O JAMES T. HOGUE DEVELOPMENT CORPORATION  
 310 WEST ROAD, SUITE 203  
 TOWSON, MARYLAND 21284  
 (301) 321-6436

JOB  
**BOWLING BROOK FARMS  
 PARCEL M - APARTMENTS**  
 A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
 SIXTH ELECTION DISTRICT  
 TAX MAP 47  
 L.1394  
 PARCEL 141  
 F.632

TITLE  
**LANDSCAPE PLAN  
 AND PLANTING DETAILS**



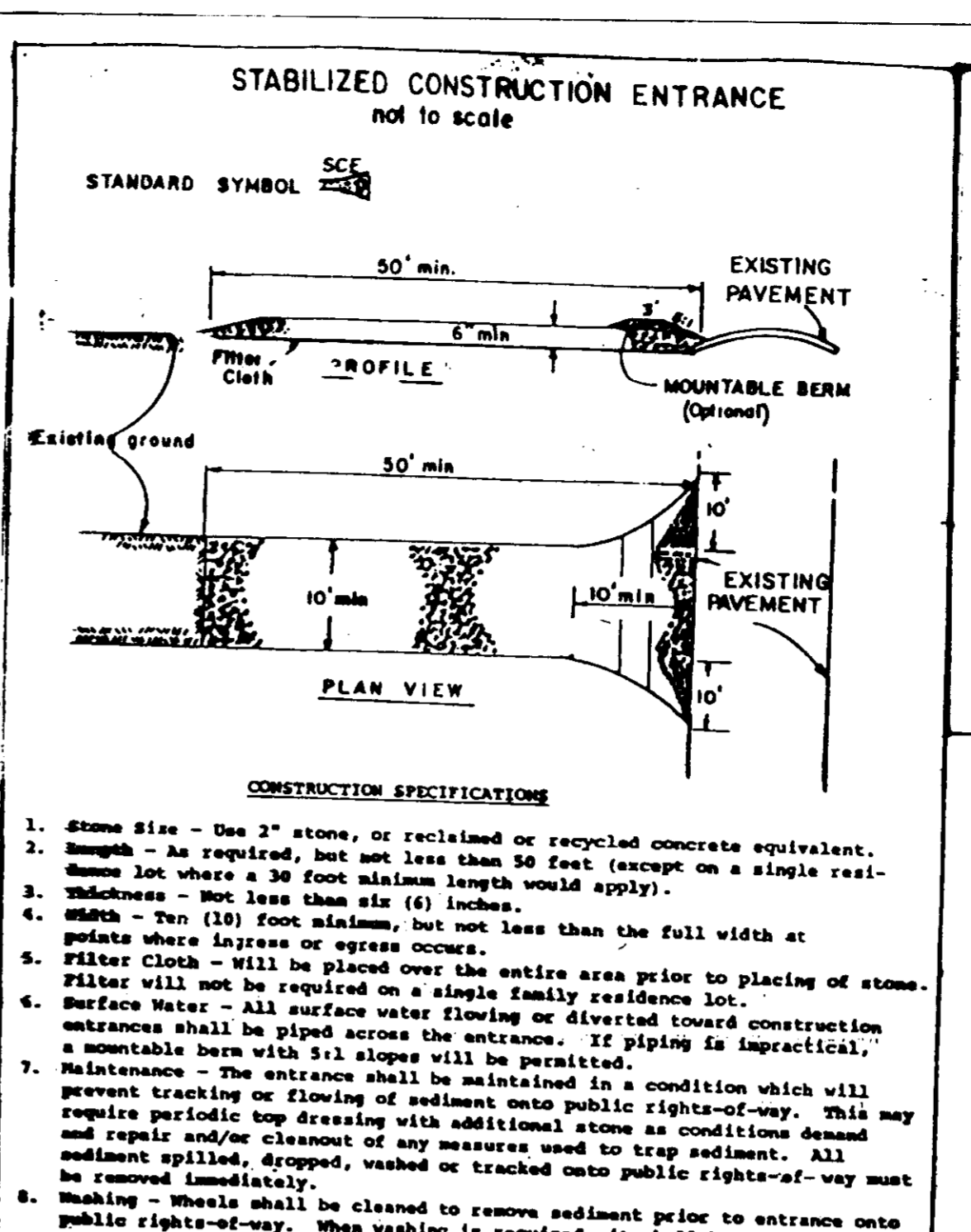
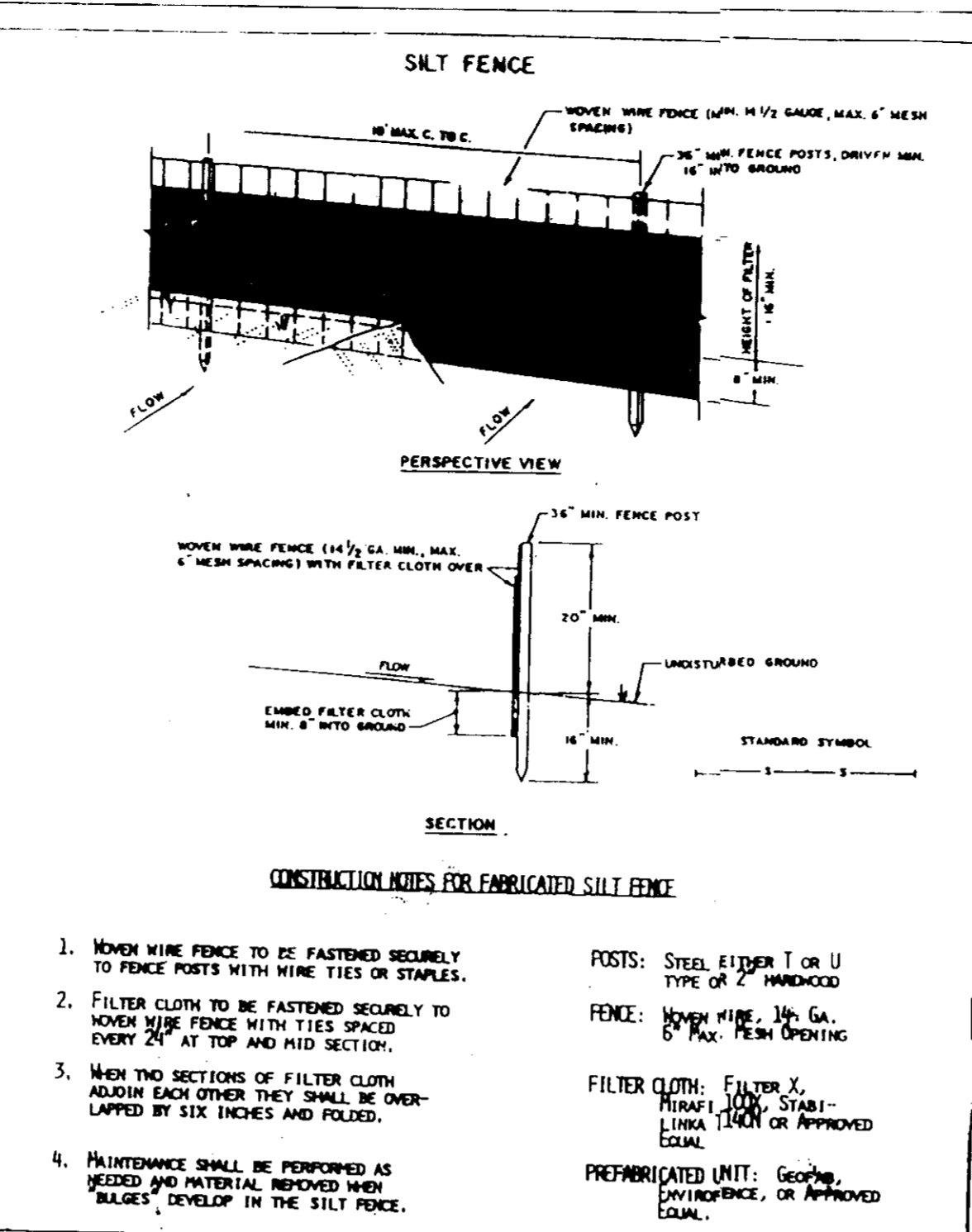
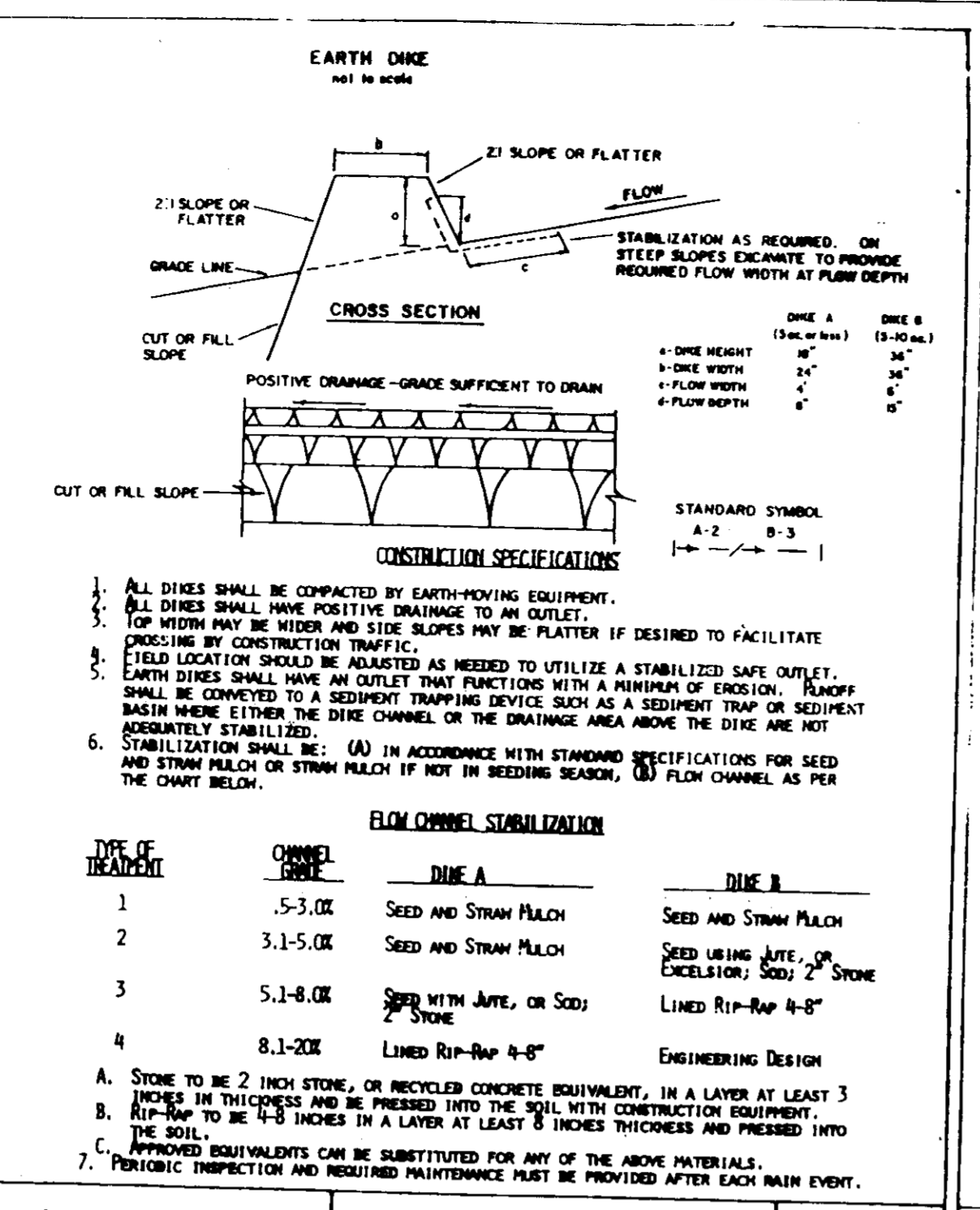
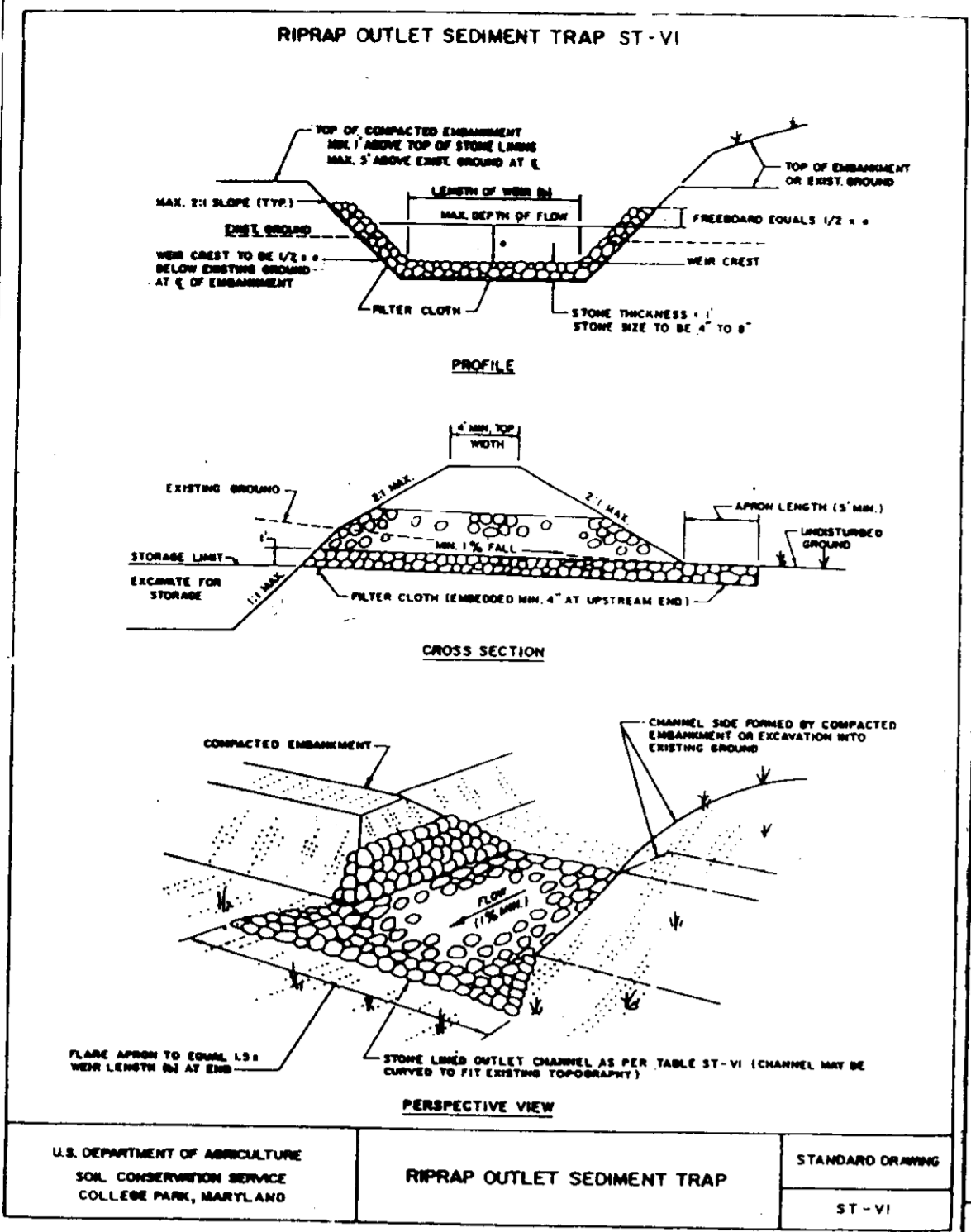
PROFESSIONAL SEAL

NO.	REVISION	DATE	BY
1	ISSUED TO HOWARD COUNTY	2-28-89	
2	ISSUED TO HO. CO. FOR 2ND REVIEW	4-17-89	
3	ISSUED TO HO. CO. FOR SIGNATURE	6/12/89	

DESIGN	DATE	FILE NO.
ANVA, RWD	2-17-89	2184-1-13
DRAWN	SCALE	
ANVA, RWD	1" = 30'	
SHEET	NO.	TOTAL
11	16	

SDP-89-170

KILDUFF NAGY-LANDSCAPE ARCHITECTS  
 10776 Baltimore Avenue, Beltsville, MD 20705  
 (301) 595-4955  
 Land Planning, Landscape Architecture, Parks and Recreation Planning



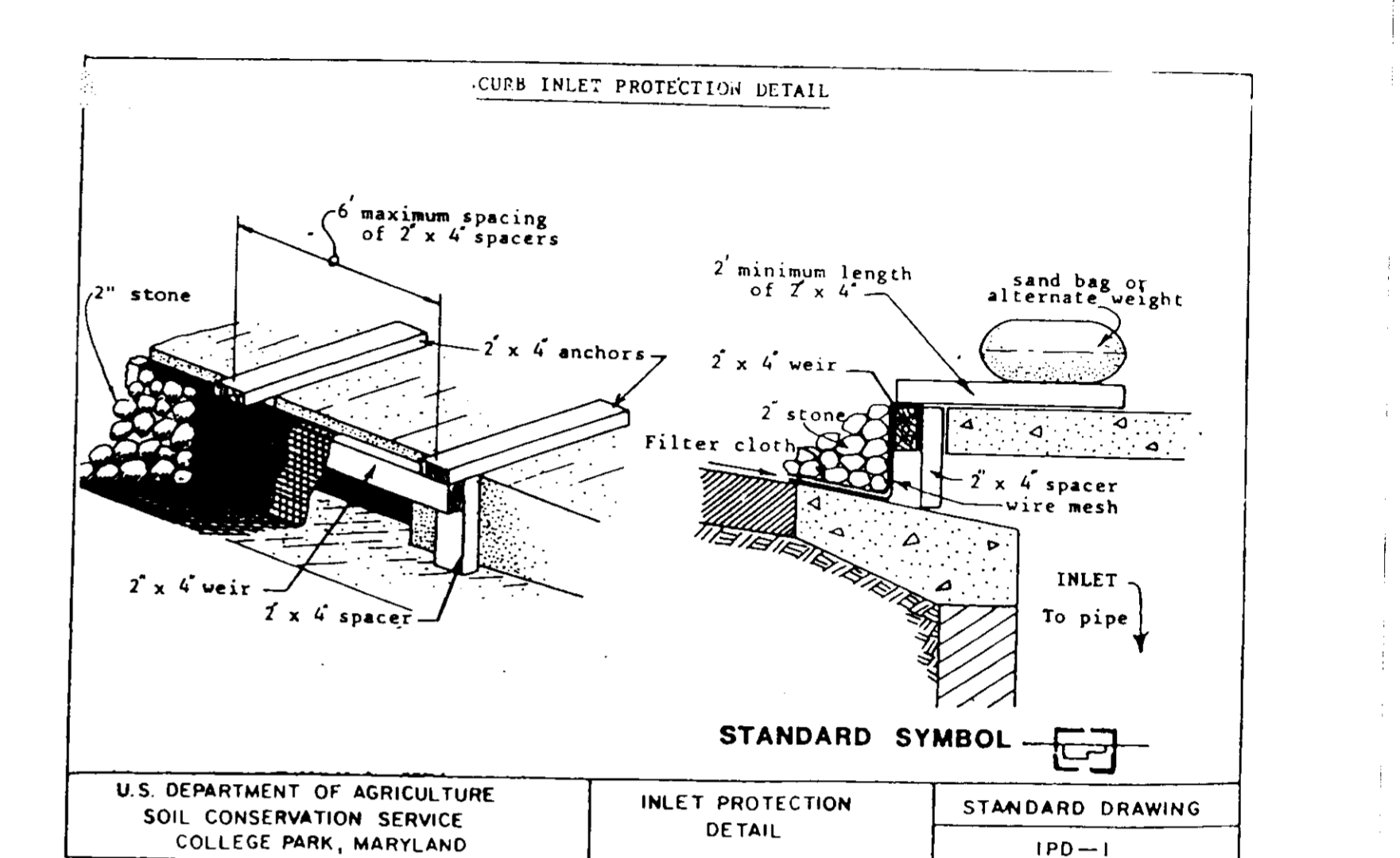
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER: *John Boyler* 7-9-89  
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 DIRECTOR: *James Keith* 8/17/89  
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: *James S. ...* 7/22/89  
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE  
 STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR: *James S. ...* 7/26/89  
 CHIEF OF BUREAU OF ENGINEERING: *...* 7-13-89

U.S. DEPARTMENT OF AGRICULTURE  
 SOIL CONSERVATION SERVICE  
 COLLEGE PARK, MARYLAND  
 RIPRAP OUTLET SEDIMENT TRAP  
 STANDARD DRAWING  
 ST-VI

U.S. DEPARTMENT OF AGRICULTURE  
 SOIL CONSERVATION SERVICE  
 COLLEGE PARK, MARYLAND  
 EARTH DIKE  
 STANDARD DRAWING  
 ED-1

U.S. DEPARTMENT OF AGRICULTURE  
 SOIL CONSERVATION SERVICE  
 COLLEGE PARK, MARYLAND  
 SILT FENCE  
 STANDARD DRAWING  
 SF-1

U.S. DEPARTMENT OF AGRICULTURE  
 SOIL CONSERVATION SERVICE  
 COLLEGE PARK, MD  
 STABILIZED CONSTRUCTION ENTRANCE  
 STANDARD DRAWING  
 SCE-1



U.S. DEPARTMENT OF AGRICULTURE  
 SOIL CONSERVATION SERVICE  
 COLLEGE PARK, MARYLAND  
 INLET PROTECTION DETAIL  
 STANDARD DRAWING  
 IPD-1

- CONSTRUCTION SPECIFICATIONS FOR ST-VI**
- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. 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 compacted 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 (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.
  - 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.

- PERMANENT SEEDING NOTES**
- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeding 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 square ft) and 600 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 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
  - 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 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 20 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, as possible in the spring, 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 2 tons/acre well anchored straw.
- Mulching:** Apply 1/4 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unroasted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.
- Maintenance:** Inspect all seeded areas and make needed repairs, replacements and reseedings.
- TEMPORARY SEEDING NOTES**
- Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
- Seeding Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.
- Soil Amendments:** Apply 60 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 20 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru period November 16 thru February 28, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, seed with 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 unroasted 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.

- SEDIMENT CONTROL NOTES**
- 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)
  - 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 seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates do not allow for proper germination and establishment of grasses.
  - 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: 14.76 Acres  
 Area Disturbed: 12.02 Acres  
 Area to be roofed or paved: 6.92 Acres  
 Area to be vegetatively stabilized: 7.76 Acres  
 Total Cut: 17,000 Cu. yds  
 Total Fill: 20,100 Cu. yds  
 Offsite waste/borrow area location
  - 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.
  - 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.

- SEQUENCE OF CONSTRUCTION**
- MAINTAIN EXISTING SEDIMENT CONTROL STRUCTURES AND MEASURES IN PLACE PER MASS GRADING PLANS (GP-89-23), BOWLING BROOK FARMS - PARCEL M.
  - OBTAIN REVISED GRADING PERMIT FOR PARCEL M.
  - GRADE SITE PER SITE DEVELOPMENT PLANS.
  - PROCEED WITH UTILITY, STREET AND BUILDING CONSTRUCTION (DELAY CONSTRUCTION OF BUILDING NO. 2 AND NO. 5).
  - PROVIDE TEMPORARY STORM DRAIN DIVERSION PIPE TO THE SEDIMENT TRAPS AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS.
  - WHEN ALL DISTURBED AREAS ARE PAVED OR STABILIZED, INSTALL CURB INLET PROTECTION DEVICES.
  - RECONSTRUCT STORM DRAIN OUTFALL PER THE SITE DEVELOPMENT PLAN. REMOVE THE EXISTING SEDIMENT TRAPS AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.
  - INSTALL PROPOSED SILT FENCE AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS.
  - CONSTRUCT BUILDING NO. 2 AND NO. 5.
  - REMOVE REMAINING SEDIMENT CONTROL MEASURES AS ITS CONTRIBUTING DRAINAGE AREAS ARE STABILIZED UNDER THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/We 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

*Kimberley J. vonParis*  
 Signature of Developer/Builder  
 6/20/89 Date

**ENGINEER'S CERTIFICATE**

I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

*...*  
 Signature of Engineer  
 6/20/89 Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS.

*James M. Adam* 6/26/89  
 Soil Conservation Service Date

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

*Stephen R. ...* 6/26/89  
 Howards, C/D Date

PLAN NUMBER

CLIENT: OWNER/DEVELOPER: GORMAN ROAD LIMITED PARTNERSHIP  
 C/O JAMES F. ... DEVELOPMENT CORPORATION  
 110 WEST ROAD, SUITE 203  
 TOWSON, MARYLAND 21284  
 (301) 221-6436

JOB: BOWLING BROOK FARMS  
 PARCEL M  
 A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
 SIXTH ELECTION DISTRICT  
 TAX MAP 47 PARCEL 141  
 L.1394 F.632

TITLE: EROSION AND SEDIMENT CONTROL DETAIL SHEET

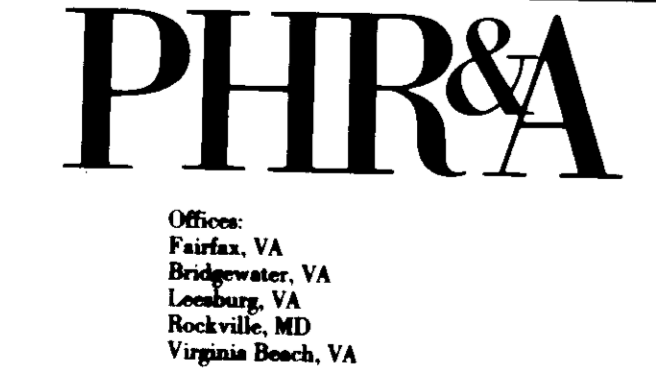
PROFESSIONAL SEAL: STATE OF MARYLAND PROFESSIONAL ENGINEER

NO. REVISIONS:  
 1 ISSUED TO HOWARD COUNTY  
 2 ISSUED TO HOWARD COUNTY FOR 2ND REVIEW  
 3 ISSUED TO HO. CO. FOR SIGNATURE

DATE: 2-28-89  
 4-17-89  
 6/20/89

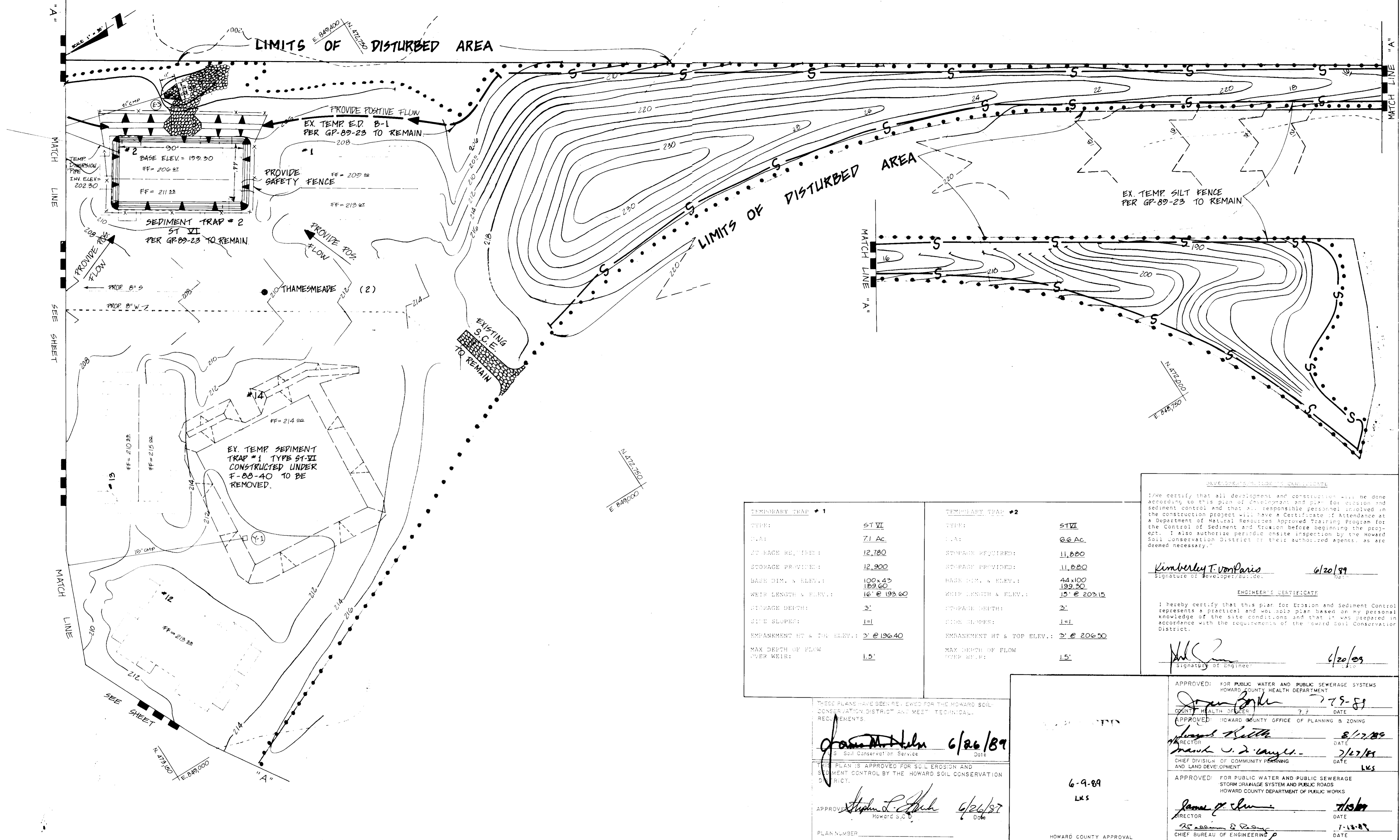
BY: DESIGN: M.J.K.  
 DRAWN: E.R.  
 CHECK:

SURVEY BY: FILE NO: 2184-1-13  
 DATE: 2-28-89  
 SCALE: 1" = 10'  
 SHEET 12 OF 16



100-301-940-1340





TEMPORARY TRAP # 1		TEMPORARY TRAP # 2	
TYPE:	ST VI	TYPE:	ST VI
AREA:	71 AC	AREA:	@ @ AC
TO BACK REL. DIM:	12,780	STORAGE REQUIRED:	11,000
STORAGE PROVIDED:	12,900	STORAGE PROVIDED:	11,000
BASE DIM. & ELEV.:	100x43 189.60	BASE DIM. & ELEV.:	44x100 199.30
WEIR LENGTH & ELEV.:	16' @ 193.60	WEIR LENGTH & ELEV.:	15' @ 203.15
STORAGE DEPTH:	3'	STORAGE DEPTH:	3'
SIDE SLOPES:	1=1	SIDE SLOPES:	1=1
EMBANKMENT HT & TOP ELEV.:	3' @ 196.40	EMBANKMENT HT & TOP ELEV.:	3' @ 206.50
MAX DEPTH OF FLOW OVER WEIR:	1.5'	MAX DEPTH OF FLOW OVER WEIR:	1.5'

I/We 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

*Kimberly T. vonParis* 6/20/89  
Signature of Developer/Builder

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

*[Signature]* 6/20/89  
Signature of Engineer

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS.

*James M. Helm* 6/26/89  
Director  
Howard S.C.D.

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

*Stephen L. Elich* 6/26/87  
Director  
Howard S.C.D.

PLAN NUMBER \_\_\_\_\_

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

*James B. Baker* 7-7-89  
Director  
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

*James R. Keith* 8/17/89  
Director  
DATE

*Frank J. J. J.* 7/27/89  
DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
LKS

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE  
STORM DRAINAGE SYSTEM AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James P. Slum* 7/15/89  
Director  
DATE

*James P. Slum* 7-13-89  
Director  
DATE

HOWARD COUNTY APPROVAL

**PHR&A**

Patton Harris Rust & Associates, P.C.  
Engineers, Surveyors, Planners, Landscape Architects  
7609 Standish Place  
Rockville, Maryland 20855  
301 762-2229

Office:  
F Fairfax, VA  
B Bridgewater, VA  
L Loudoun, VA  
R Rockville, MD  
V Virginia Beach, VA

CLIENT

OWNER/DEVELOPER

GORMAN ROAD LIMITED PARTNERSHIP  
C/O JAMES F. KNIGHT DEVELOPMENT CORPORATION  
110 WEST ROAD, SUITE 203  
TOWSON, MARYLAND 21284  
(301) 321-6416

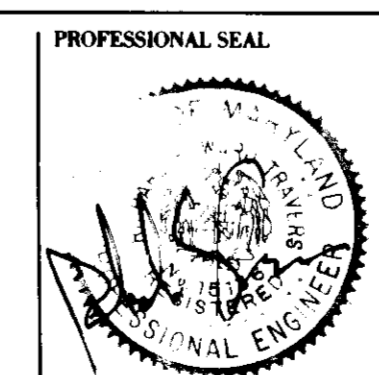
JOB

**BOWLING BROOK FARMS  
PARCEL M - APARTMENTS**

A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
SIXTH ELECTION DISTRICT  
TAX MAP 47 PARCEL 141  
L.1394 F.632

TITLE

**EROSION AND SEDIMENT  
CONTROL PLAN**



PROFESSIONAL SEAL

NO.	REVISIONS	DATE	BY
1	ISSUED TO HOWARD COUNTY	2-28-89	
2	ISSUED TO HO. CO. FOR 2ND REVIEW	4-17-89	

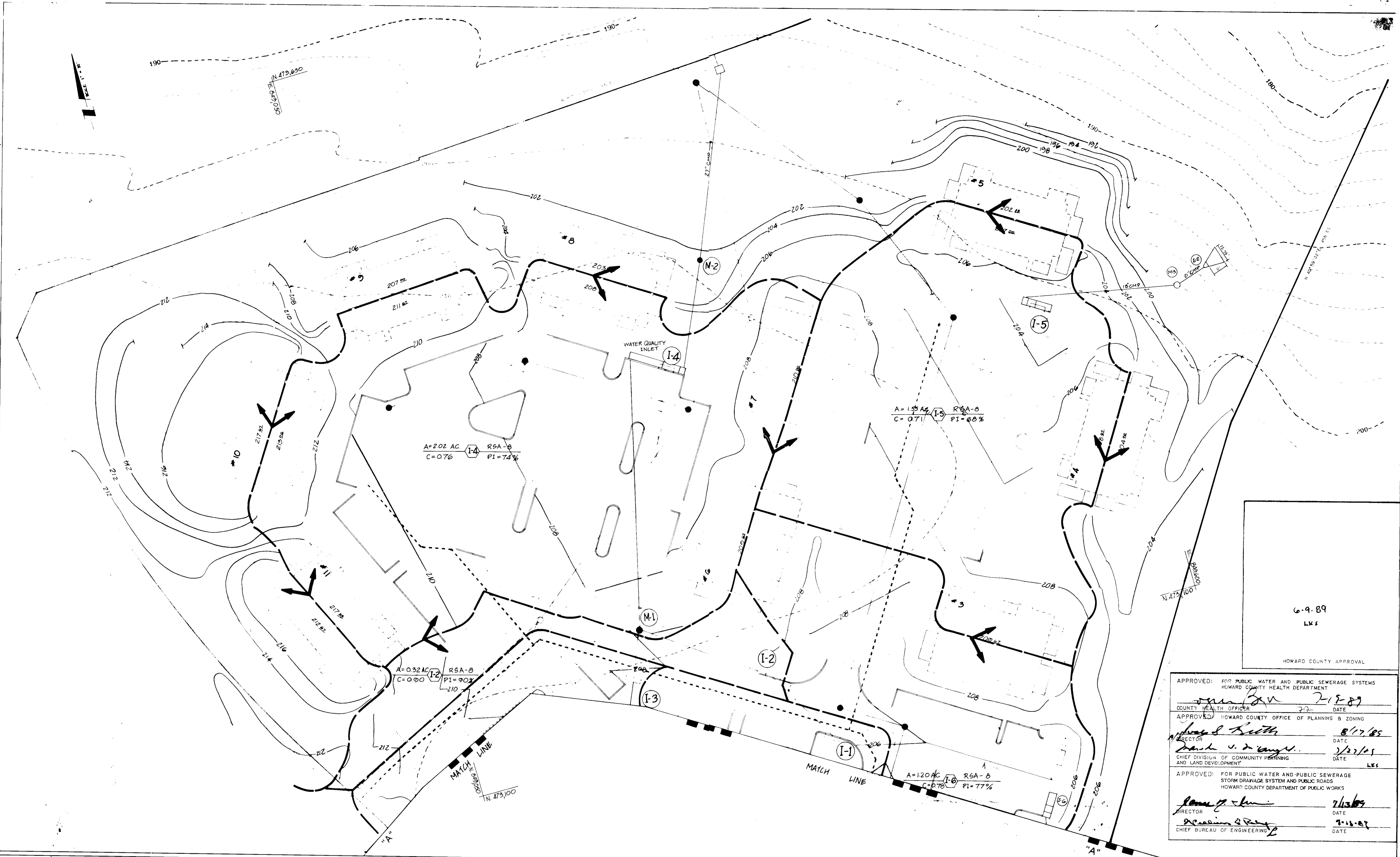
DATE	BY	SURVEY BY	FILE NO.
2-28-89			2184-1-13
4-17-89			

DESIGN	DATE
M.J.K.	2-28-89

DRAWN	SCALE
E.R.	1" = 30' @ 2'

CHECKED	SHEET
	14 OF 16

SDP-89-170



6-9-89  
LWS

HOWARD COUNTY APPROVAL

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT	
<i>[Signature]</i>	2-18-89
COUNTY HEALTH OFFICER	DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING	
<i>[Signature]</i>	8/17/85
DIRECTOR	DATE
<i>[Signature]</i>	3/22/85
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>[Signature]</i>	7/13/89
DIRECTOR	DATE
<i>[Signature]</i>	7-13-89
CHIEF BUREAU OF ENGINEERING	DATE

T.C.A. 301-148.13-40

**PHR&A**

Patton Harris Rust & Associates, p.c.  
Engineers, Surveyors, Planners, Landscape Architects  
7609 Sandbank Place  
Rockville, Maryland 20855  
301.762.2220

Offices:  
Fairfax, VA  
Bridgewater, VA  
Lomburg, VA  
Hockville, MD  
Virginia Beach, VA

CLIENT  
OWNER/DEVELOPER  
GORMAN ROAD LIMITED PARTNERSHIP  
C/O JAMES F. KNOTT DEVELOPMENT CORPORATION  
110 WEST ROAD, SUITE 203  
TOWSON, MARYLAND 21284  
(301) 321-6436

JOB  
**BOWLING BROOK FARMS  
PARCEL M -APARTMENTS**  
A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
SIXTH ELECTION DISTRICT  
TAX MAP 47 PARCEL 14'1  
L.1394 F.632

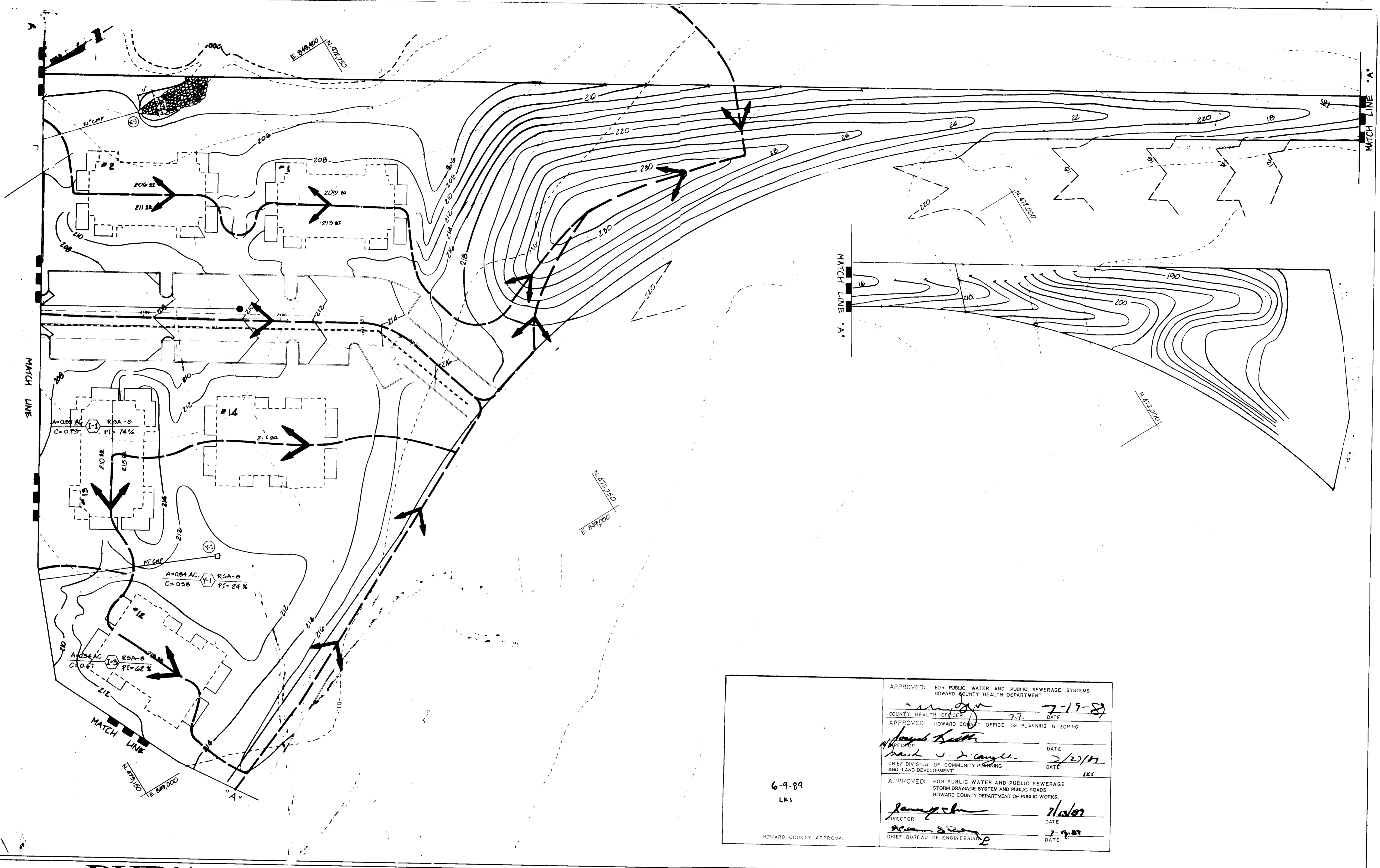
TITLE  
**DRAINAGE AREA MAP**

PROFESSIONAL SEAL  
*[Signature]*

NO.	REVISIONS
1	ISSUED TO HOWARD COUNTY
2	ISSUED TO HO. CO. FOR 2ND REVIEW
3	ISSUED TO HO. CO. FOR SIGNATURE

DATE	BY	SURVEY BY	FILE NO.
2-28-89		DESIGN M.J.K.	2184-1-13
4-17-89		DRAWN E.R.	DATE 2-28-89
6/20/89		CHECKED	SCALE 1" = 30'
			SHEET 15 OF 16

SDP-89-170



6-9-89 LWS	APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT <i>[Signature]</i> 7-19-89 COUNTY HEALTH OFFICER DATE
	APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING <i>[Signature]</i> DIRECTOR DATE
	APPROVED: CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT <i>[Signature]</i> 5/20/89 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE
	APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEM AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>[Signature]</i> 7/13/89 DIRECTOR DATE
HOWARD COUNTY APPROVAL	APPROVED: CHIEF BUREAU OF ENGINEERING <i>[Signature]</i> 7-9-89 CHIEF BUREAU OF ENGINEERING DATE

# PHR&A



Patton Harris Root & Associates, pc  
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 7609 Shomokh Place  
 Rockville, Maryland 20855  
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 TOMSON, MARYLAND 21204  
 (301)321-6436

JOB  
**BOWLING BROOK FARMS  
 PARCEL M -APARTMENTS-**  
 A RESUBDIVISION OF LOT 2, BOWLING BROOK FARMS  
 SIXTH ELECTION DISTRICT  
 TAX MAP 47 PARCEL 141  
 L.1394 F.632

TITLE  
**DRAINAGE AREA MAP**

PROFESSIONAL SEAL  
*[Signature]*

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2	ISSUED TO HO. CO. FOR 2ND REVIEW
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DATE	BY	SURVEY BY	FILE NO.
2-28-89			2184-1-13
4-17-89			DATE 2-28-89
6/20/89			

DESIGN	SCALE
M.J.K.	1" 30' 2"
DRAWN	SHEET
E.R.	16 OF 16
CHECK	