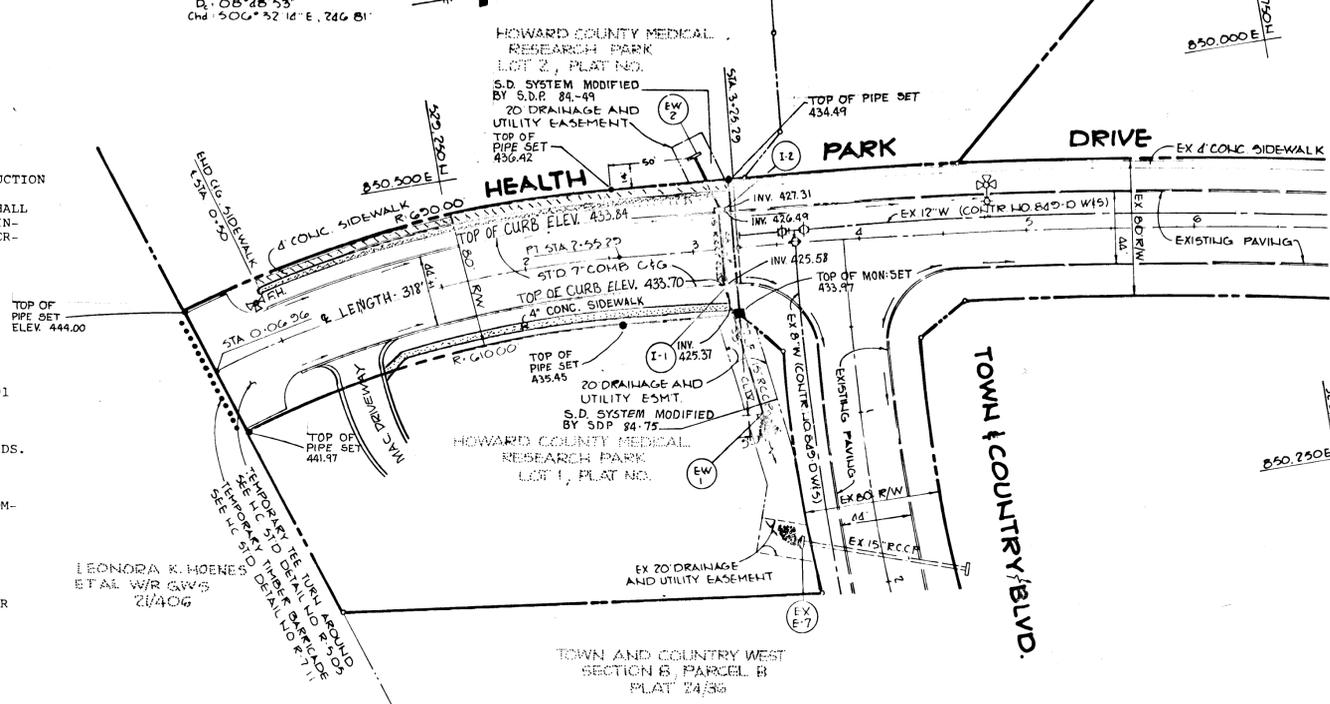


SHEET INDEX	
NO.	DESCRIPTION
1	PLAN AND PROFILE OF HEALTH PARK DRIVE
2	DETAILS
3	D.A.M., SEDIMENT CONTROL, AND STORM DRAIN PROFILE

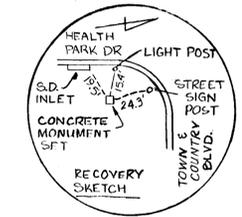
**CURVE DATA**  
 FROM STA 0+00 TO STA 3+25.22  
 $\Delta: 21^{\circ}53'26''$   
 $R: 650.00'$   
 $L: 248.34'$   
 $T: 125.70'$   
 $D: 05^{\circ}48'53''$   
 $Chd: 506^{\circ}52'14'' E, 246.81'$

**GENERAL NOTES**

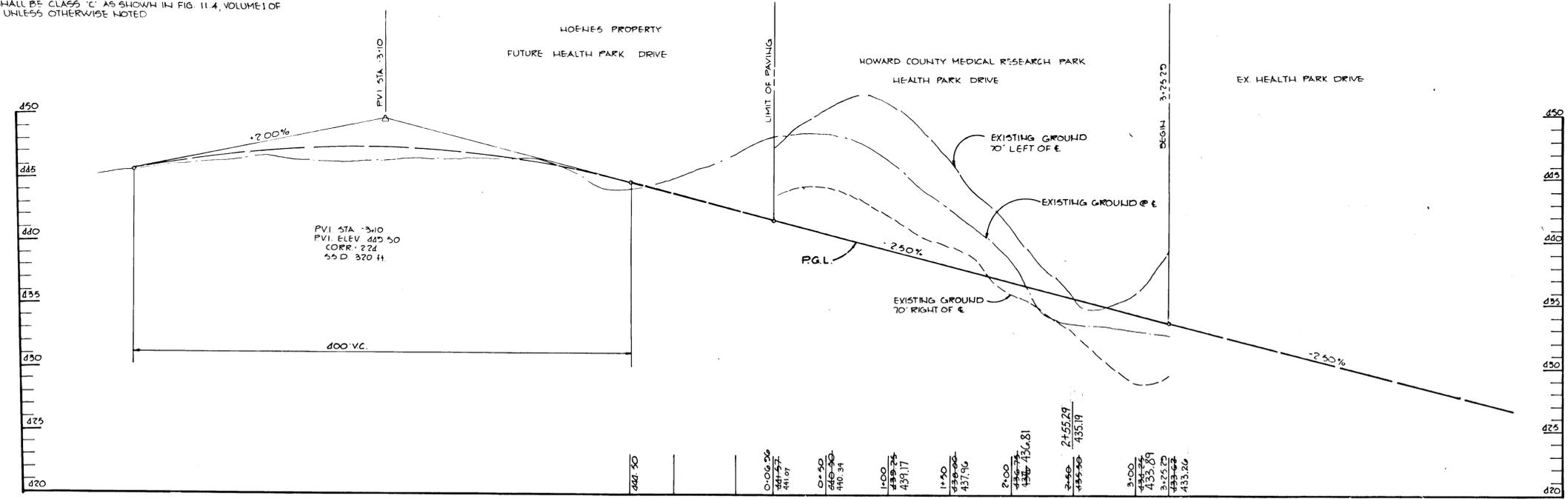
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.  
 MISS UTILITY 555-0100  
 BELL TELEPHONE SYSTEM 393-3649  
 LONG DISTANCE CABLE DIVISION 393-3553 OR 3554  
 BALTIMORE GAS AND ELECTRIC COMPANY 539-8000, EXT. 691  
 HOWARD COUNTY BUREAU OF UTILITIES 992-2366  
 HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION 792-7272  
 (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE 35.0' RADII UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1971 EDITION.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:  
 ALL 80' RIGHT-OF-WAYS 40 M.P.H.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM 1929.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% COMPACTION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED POC PER 10-03-77 COMPREHENSIVE ZONING PLAN.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED JANUARY, 1982 BY WUDKINS ASSOCIATES
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME I OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED



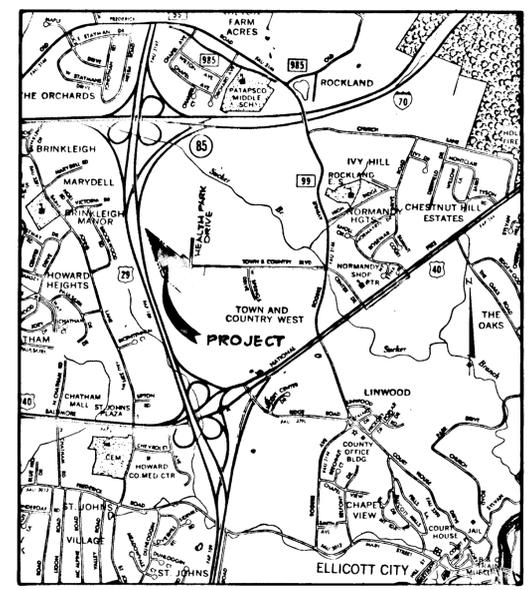
**PLAN**  
 SCALE: 1" = 50'



**CONC. MON. LOCATION**  
 NO SCALE



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

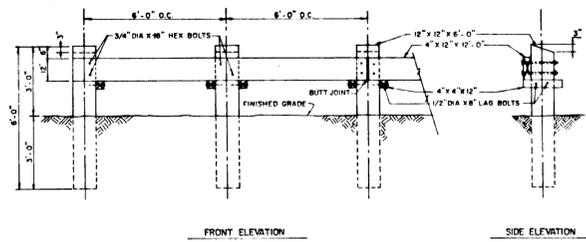


**VICINITY MAP**  
 SCALE: 1" = 2000'

- HORIZONTAL CONTROL - HOWARD COUNTY STATIONS NO. 3443003 AND 3342001  
 VERTICAL CONTROL -  
 1. TOP NUT OF FIRE HYDRANT ON SOUTH SIDE OF TOWN AND COUNTRY BLVD., 320' ± EAST OF E OF HEALTH PARK DRIVE. ELEV. 425.37  
 2. TOP NUT OF FIRE HYDRANT ON WEST SIDE OF TOWN ENTRANCE DRIVE, 110' ± NE OF N.E. CORNER OF OAKVIEW TREATMENT CENTER BLDG. ELEV. 449.09

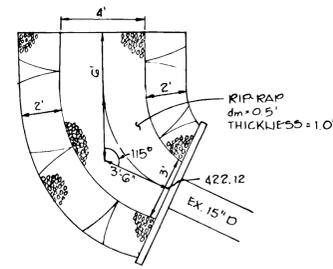
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	
<i>Arthur E. Muzge</i>	DATE: 11-8-83
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>William S. Ryan</i>	DATE: 11-9-83
DATE NO REVISION	
OWNER	PETER KIRK, PATRICK MCCUAN AND WILBUR E. SIMMONS JR. TRUSTEES 1000 EQUITABLE BANK CENTER COLUMBIA, MARYLAND 21044
DEVELOPER	K.M.S. INC. 1000 EQUITABLE BANK CENTER COLUMBIA, MARYLAND 21044
PROJECT	HOWARD COUNTY MEDICAL RESEARCH PARK
AREA RECORD PLAT RECORDING REFERENCE NO.	TAX MAP NO 17 PARCEL G12 2ND ELECTION DISTRICT HOWARD COUNTY MARYLAND
TITLE	PLAN AND PROFILE OF HEALTH PARK DRIVE
<b>THE RIEMER GROUP, INC.</b> The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm 8659 Baltimore National Pike, Ellicott City, Maryland 21043 801-461-2600	
DATE: 11-8-83	DESIGNED BY: G.R.B.
	DRAWN BY: J.S.K.
	PROJECT NO: 005000
	DATE: AUGUST 12, 1983
	SCALE: AS SHOWN
	DRAWING NO. 1 OF 3

1023

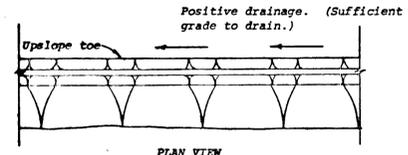
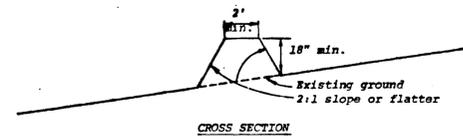


- NOTES:
1. ALL TIMBERS TO BE PRESSURE TREATED
  2. ALL HARDWARE TO BE HOT DIPPED GALVANIZED
  3. BEVEL ALL EXPOSED EDGES 1/2" X 1/2"
  4. MAY BE USED AS QUADRANT WITH APPROVAL OF D.P.W.
  5. BARRICADE TO EXTEND FULL WIDTH OF R/W
  6. TYPE B BARRICADE TO BE USED ONLY WHEN ANTICIPATED TIME OF USE EXCEEDS ONE YEAR

**DEAD-END BARRICADE**  
NO SCALE



**RIP-RAP DETAIL @ E-7**  
1/4" SCALE



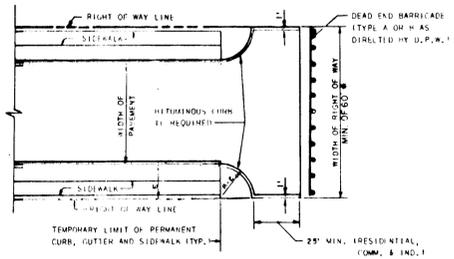
**Construction Specifications**

1. All dikes shall be machine compacted.
2. All perimeter dikes shall have positive drainage to an outlet.
3. A. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area or into a level spreader or grade stabilization structure.  
B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as sediment trap or a sediment basin or to an area protected by any of these practices.
4. Stabilization, when required, shall be done in accordance with Standard and Specifications for Grassed Waterway. The minimum area to be stabilized shall be the channel flow area.
5. Periodic inspection and required maintenance shall be provided.



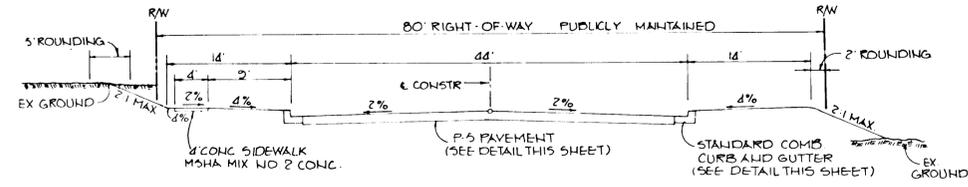
\* Drainage area less than 5 acres

**PERIMETER DIKE**  
NO SCALE

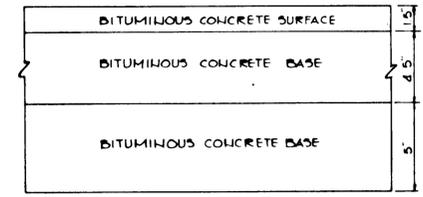
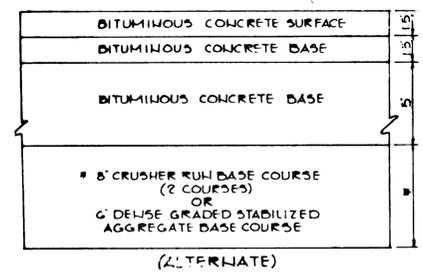


- NOTES:
1. A TEE TURN-AROUND SHALL BE USED IN LIEU OF A CUL-DE-SAC ONLY IF THE STREET IS TO BE EXTENDED IN THE FUTURE.
  2. BITUMINOUS CURB SHALL EXTEND AROUND THE TEE TURN-AROUND IF AND AS REQUIRED TO CONTROL CURB DRAINAGE FROM THE ROADWAY SECTION.
  3. REFER TO STANDARD R-3.08 FOR TYPICAL ROADWAY PRELIMINARY LIMIT OF PAVING.
  - \* FOR LOCAL ROADS, PROVIDE 5' REVERSIBLE EASEMENT EACH END OF THE TEE

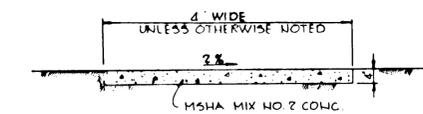
**TEMPORARY TEE TURN-AROUND**  
NO SCALE



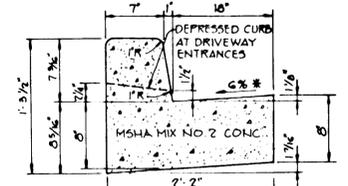
**TYPICAL SECTION 80' R/W**  
NO SCALE



**TYPICAL PAVING SECTION**  
NO SCALE



**SIDEWALK DETAIL**  
No Scale



**STANDARD 7" COMBINATION CURB AND GUTTER**  
No Scale

\* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

**STANDARD 7" COMBINATION CURB AND GUTTER**  
No Scale

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."

*John McLean* 11/3/83  
DEVELOPER DATE

BY THE ENGINEER:

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

*Richard E. Mungge* 11-2-83  
ENGINEER DATE

REVIEWED FOR HOWARD COUNTY S.C.D.  
NAME

AND MEETS TECHNICAL REQUIREMENTS  
*John McLean* 11-8-83  
U.S. SOIL CONSERVATION SERVICE DATE

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

*W. J. Brown* 11-8-83  
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*William E. Mungge* 11-8-83  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William E. Mungge* 11-2-83  
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO	REVISION

OWNER: PETER KIRK, PATRICK MCCOY AND WILBUR E. SIMMONS JR. TRUSTEES  
1000 EQUITABLE BANK CENTER  
COLUMBIA, MARYLAND 21044

DEVELOPER: KMS, INC.  
1000 EQUITABLE BANK CENTER  
COLUMBIA, MARYLAND 21044

PROJECT: HOWARD COUNTY MEDICAL RESEARCH PARK

AREA RECORD PLAT RECORDING REFERENCE NO. TAX MAP NO. 17 PARCEL G12  
2<sup>ND</sup> ELECTION DISTRICT  
HOWARD COUNTY MARYLAND

TITLE: DETAILS

**THE RIEMER GROUP, INC.**

The Riemer Group, Inc. - A Land Planning, Design & Civil Engineering Firm  
8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301-461-2690

11-2-83 DATE

DESIGNED BY: G.R.B.

DRAWN BY: J.S.K.

PROJECT NO: 003000

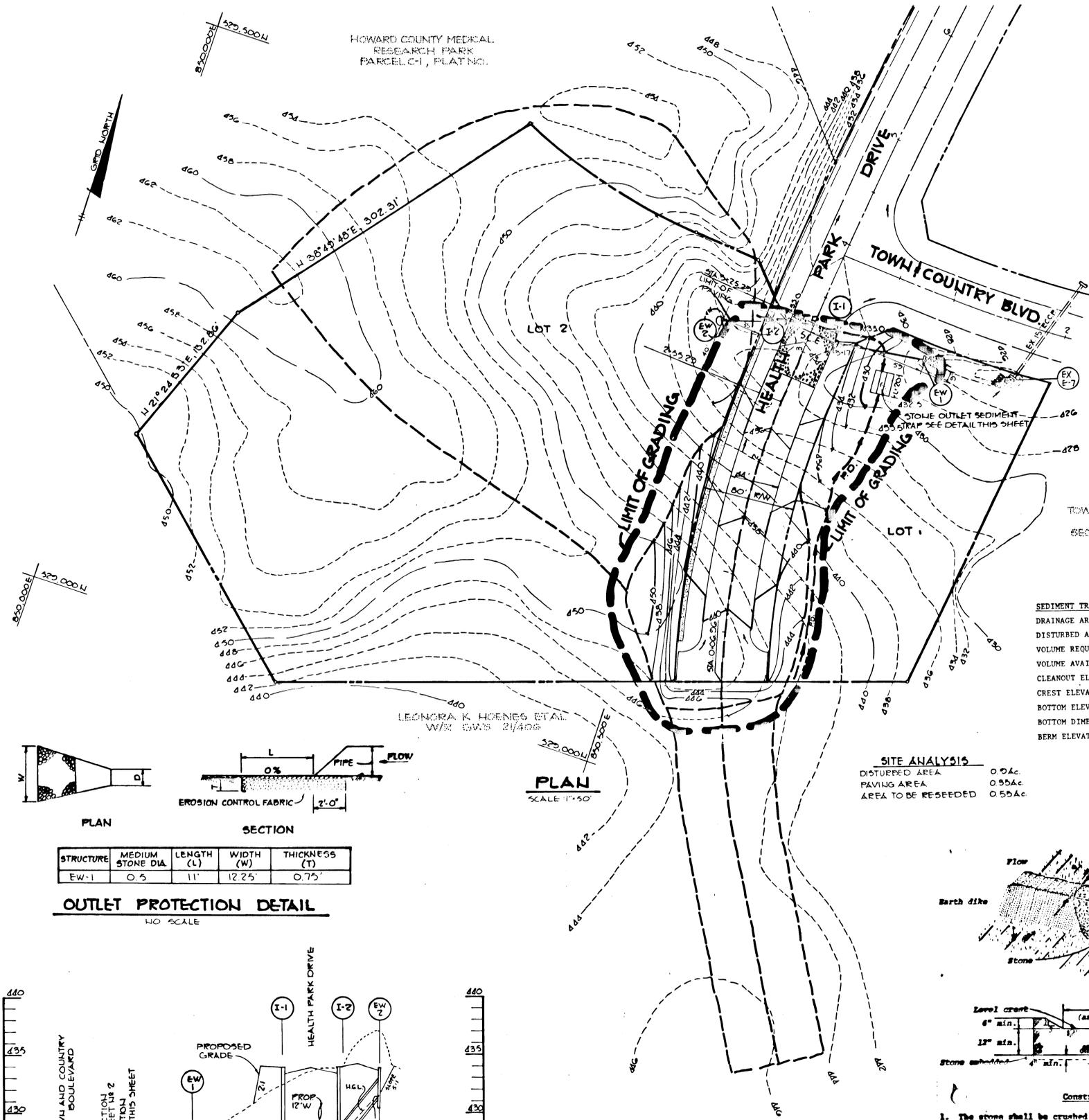
DATE: AUGUST 12, 1983

SCALE: AS SHOWN

DRAWING NO. 2 OF 3



HOWARD COUNTY MEDICAL RESEARCH PARK PARCEL C-1, PLAT NO.



TOWN AND COUNTRY WEST SECTION 5, PARCEL B PLAT 24/86

**SEDIMENT TRAP DATA**

DRAINAGE AREA	3.32 Ac.
DISTURBED AREA	0.9 Ac.
VOLUME REQUIRED	5975 cu.ft.
VOLUME AVAILABLE	7600 cu.ft.
CLEANOUT ELEVATION	430.75
CREST ELEVATION	432.5
BOTTOM ELEVATION	429.00
BOTTOM DIMENSIONS	35'x40'
BERM ELEVATION	435.5

**SITE ANALYSIS**

DISTURBED AREA	0.9 Ac.
PAVING AREA	0.95 Ac.
AREA TO BE RESEEDED	0.95 Ac.

**SEDIMENT CONTROL CONSTRUCTION NOTES**

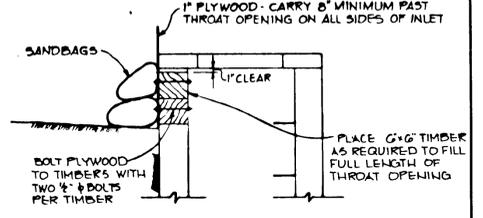
- GENERAL NOTES**
- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction (922-2070).
  - All sediment control structures will be installed in accordance with "The Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" as prepared by the U.S. Department of Agriculture Soil Conservation Service.
  - Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
  - All disturbed areas are to be dressed and stabilized according to the temporary or permanent seeding schedules as soon as proper weather conditions exist for the establishment of a permanent vegetative cover.
  - Sediment will be removed from traps when the depth reaches the clean out elevation shown on the plans.
  - Fertilizer and lime rates may be changed through authorization by the Howard Soil Conservation District if soil tests determine a reduction in the specified rates is justified.
  - 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.
  - References called for on the sediment control construction plan and details are made to "The Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas".
  - SEEDING CONTROL FOR ROAD CONSTRUCTION SHALL BE IN ACCORDANCE WITH G.P.M. 23. IN LIEU OF G.P.M. 23 SEDIMENT CONTROL WILL BE DONE ACCORDANCE WITH THIS PLAN.

**TEMPORARY SEEDING**

- Area to be seeded shall be recently loosened. If the ground is packed, crusted or hard, the top layer of soil shall be loosened by discing, raking or other acceptable means.
- Apply 10-20-10 fertilizer (or equivalent) at the rate of 600 lbs. per acre or 15 lbs. per 1000 square feet.
  - Where soil is known to be highly acid, apply dolomitic limestone at the rate of 1 ton per acre.
  - Work both into soil and seed with cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry will include seed and fertilizer) at the rate of 40 lbs. per acre of Italian or perennial ryegrass.
  - Mulch with unweathered small grain straw at the rate of 1½ to 2 tons, per acre and anchor with a cutback asphalt or emulsified asphalt at the rate of 5 gal. per 1000 square feet.

**PERMANENT SEEDING**

- Final stabilization will take place as soon as possible as weather conditions permit, as follows:
- Apply dolomitic limestone at the rate of 2 tons per acre (one ton per acre if application of ton per acre was made for temporary seeding.)
  - Apply 0-20-20 fertilizer at the rate of 600 lbs. per acre harrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3" lawns or high maintenance areas will be dragged and leveled with a York rake. At the time of seeding apply 400 pounds of 30-0-0 ureaform fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.
  - Seed with a mixture of certified "Merion" Kentucky bluegrass - 40 lbs. per acre; common Kentucky bluegrass @ 40 lbs. per acre; Red Fescue, Pennlawn or Jamestown @ 20 lbs. per acre.
  - Mulch with unweathered small grain straw at the rate of 1½ to 2 tons per acre and anchor with a cutback asphalt or emulsified asphalt at the rate of 5 gallons per 1000 square feet.
  - Seed all slopes with a mixture of certified Kentucky 31 tall fescue @ 50 lbs. per acre and inoculated Korean Lespedeza @ 15 lbs. per acre.
  - Sodded swales shall be Kentucky 31 tall fescue.



**INLET BLOCKING DETAIL**  
No Scale

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."

*Jamie McLean* 11/3/83  
DEVELOPER: DATE

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

*Arthur E. Muegg* 11-8-83  
ENGINEER: DATE

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS  
*Arthur E. Muegg* 11-8-83  
U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*Donna R. Rowe* 11-8-83  
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Arthur E. Muegg* 11-8-83  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Arthur E. Muegg* 11-8-83  
CHIEF, BUREAU OF ENGINEERING DATE

DATE NO. REVISION  
OWNER: PETER KIRK, PATRICK MCCUJAN AND WILBUR E. SIMMONS JR. TRUSTEES  
1000 EQUITABLE BANK CENTER  
COLUMBIA, MARYLAND 21044

DEVELOPER: K.M.S. INC.  
1000 EQUITABLE BANK CENTER  
COLUMBIA, MARYLAND 21044

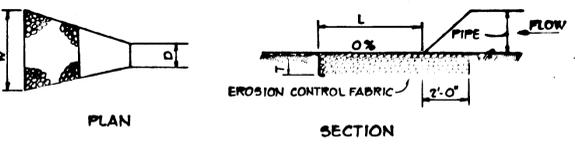
PROJECT: HOWARD COUNTY MEDICAL RESEARCH PARK

AREA RECORD PLAT RECORDING REFERENCE NO. TAX MAP NO. 17 PARCEL G12 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: DRAINAGE AREA MAP SEDIMENT CONTROL AND STORM DRAIN PROFILE

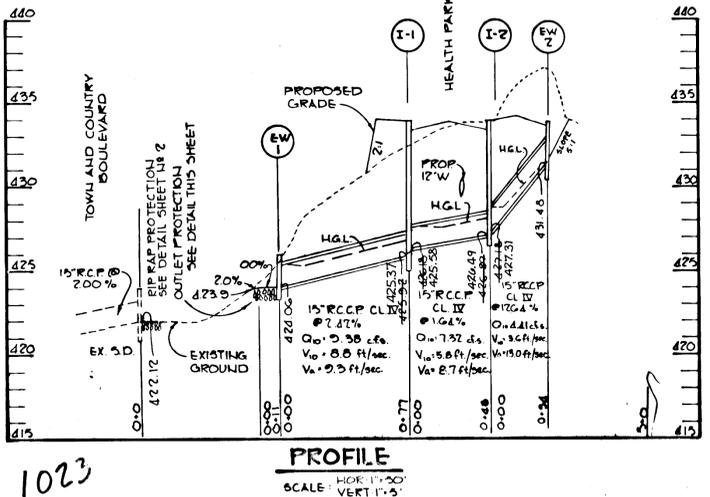
**THE RIEMER GROUP, INC.**  
The Riemer Group, Inc. - A Land Planning, Design & Civil Engineering Firm  
8655 Baltimore National Pike, Ellicott City, Maryland 21043 301-461-2690

11-2-83 DATE  
DESIGNED BY: G.P.B.  
DRAWN BY: J.S.K.  
PROJECT NO: 003000  
DATE: AUGUST 12, 1983  
SCALE: AS SHOWN  
DRAWING NO. 3 OF 3



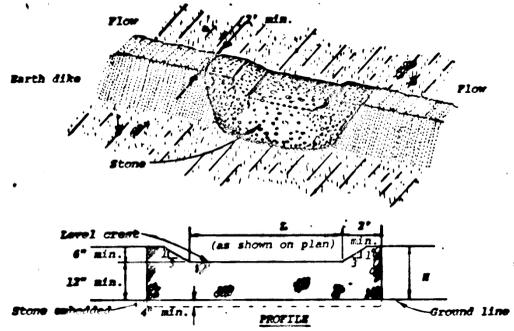
STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
EW-1	0.5	11'	12.25'	0.75'

**OUTLET PROTECTION DETAIL**  
NO SCALE



**STRUCTURE SCHEDULE**

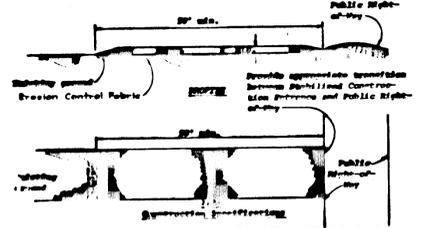
NO.	TYPE	LOCATION	INV. IN.	INV. OUT.	TOP ELEV.	REMARKS
EW-1	C	see plan	-	424.06	426.06	Ho.Co. Std. 5D 5.21
I-1	A-5	R-22' 1/2\"/>				



**Construction Specifications**

- The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet MSHA Size No. 2 or AASHTO designation #43 Size No. 2 or 24.
- The crest of the stone dike shall be at least six inches lower than the lowest elevation of the top of the earth dike and shall be level.
- The stone outlet structure shall be embedded into the soil a minimum of four inches.
- The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
- The stone outlet structure shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation among the stone, washout, construction traffic damage, etc.

**STONE OUTLET STRUCTURE**  
NO SCALE



**STABILIZED CONSTRUCTION ENTRANCE**  
NO SCALE

**SEQUENCE OF CONSTRUCTION**

- OBTAIN REQUIRED GRADING PERMIT.
- CLEAR AREA OF TREES AND BRUSH TO LIMIT SHOWN ON PLAN.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- INSTALL PERIMETER DIKE AND SEDIMENT TRAP.
- SEED BERMS PER TEMPORARY SEEDING NOTES.
- INSTALL STORM DRAIN AS SHOWN ON PLAN. BLOCK INLET OPENINGS ON I-1 AND I-2.
- GRADE HEALTH PARK DRIVE. INSTALL SIDEWALK CURB AND PAVING, AFTER PROPOSED WATER MAIN CONTRACT. SET TEMPORARY BARRICADE AT END OF HEALTH PARK DRIVE ACCORDING TO COUNTY STANDARDS.
- REMOVE BLOCKING FROM INLETS I-1 AND I-2.
- ALL DISTURBED AREAS ARE TO BE SEED AS DESCRIBED UNDER PERMANENT SEEDING NOTE, THIS SHEET.
- UPON APPROVAL OF SOIL CONSERVATION DISTRICT, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROL DEVICES AND PERMANENTLY RE-SEED DISTURBED AREAS.