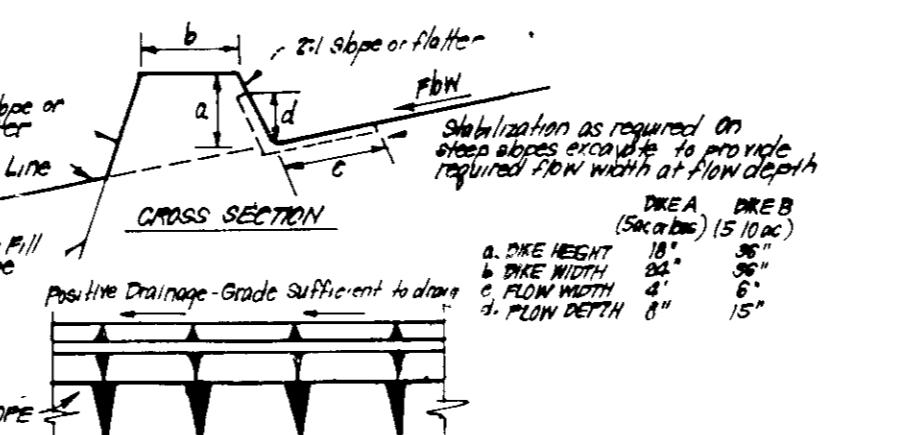


CONSTRUCTION SPECIFICATIONS:
1. Each bale shall be placed at the top of a slope or on the contour and in a row with ends facing towards the outlet bale.
2. Each bale shall be embedded in the soil a min. of 4' and placed so the bondspikes are horizontal.
3. Bales shall be securely anchored in place by either 2 spikes or 1 spike has driven thru the bale.
4. The 1st spike shall be driven into the bale at an angle to force it into the bale.
5. Spikes shall be driven flush with the bale.
6. Inspection shall be frequent and repair/replacement shall be made promptly as needed.
7. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BAILE DIKE DETAIL (SBD)

NO SCALE



CONSTRUCTION SPECIFICATIONS:
1. All dikes shall be compacted by earth-moving equipment.
2. Dikes shall have a live drainage to an outlet.
3. The width, max. width of side slopes may be flatter if desired to facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized site outlet.
5. Soil slopes shall be in place before application of a layer of straw mulch and seed.
6. Soil slopes shall be in place before application of a layer of straw mulch and seed.
7. Stabilization shall be: (A) In accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season; (B) flow channel as per chart below.

FLOW CHANNEL STABILIZATION

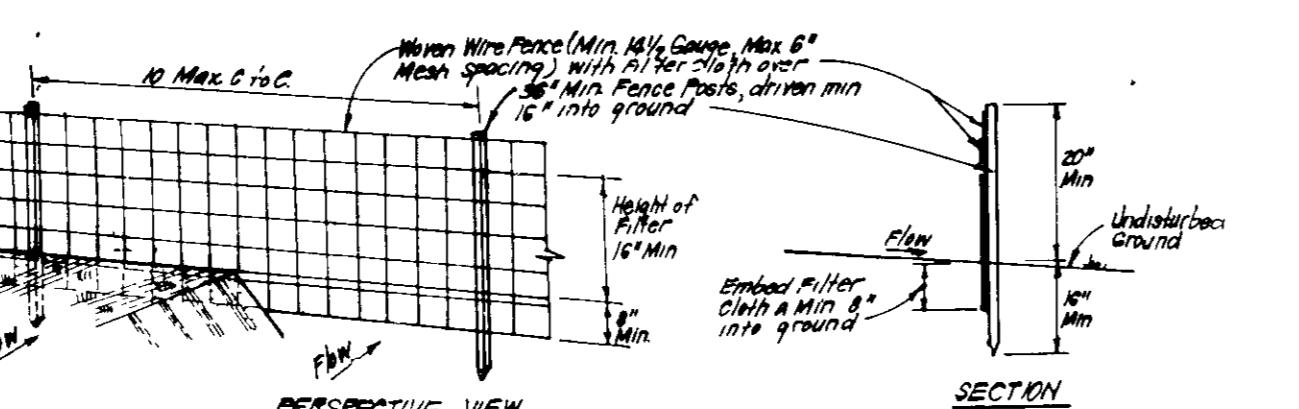
TYPE OF TREATMENT	CHANNEL	DIKE A	DIKE B
1	0.5-3.0%	Seed & Straw Mulch	Seed & Straw Mulch
2	3.1-5.0%	Seed & Straw Mulch	Seed & White or Ecobinder, 2d, 2" straw
3	5.1-8.0%	Seed & White or Ecobinder, 2d, 2" straw	2" straw
4	8.1-10.0%	2" straw	4" straw

A. Shore to be 2" slope, required concrete spandrel, in a layer at least 3" thick and to be pressed into soil with construction equipment.
B. Rip Rap to be 4"-6" in a layer at least 6" thick, pressed into soil.
C. Approved equivalents can be substituted for any of the above materials.

7 Periodic inspection and required maintenance must be provided after each rain

EARTH DIKE DETAIL (ED.)

NO SCALE



CONSTRUCTION SPECIFICATIONS:
1. Heavy wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter cloth to be fastened securely to heavy wire fence with wire ties or staples.
3. When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and sealed.
4. Reinforcement shall be furnished by needed and material removed when holes develop in soil fence.

SILT FENCE DETAIL (S)

NO SCALE

Reviewed for	HOWARD S.C.D.
Name	
and meets technical requirements	3/29/89
Signature	Date
U.S. Soil Conservation Service	

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

Abraham L. Shuler 3/29/89
APPROVED DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT	4-16-89
COUNTY HEALTH OFFICER	DATE
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING	4-28-89
PLANNING DIRECTOR	DATE
Mark V. Clegg	4-28-89
CHIEF DIVISION OF PLANNING & DEVELOPMENT	4-28-89
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	4-7-89
Karen M. Hall	4-7-89
CHIEF BUREAU OF ENGINEERING	4-7-89

9-28-89

LKS

DEVELOPER'S/BUILDER'S CERTIFICATE

I hereby 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 Dept. 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 or their authorized agents, as are deemed necessary.

Blaine G. Shuler 3/3/88
Signature of Developer



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.

G. Nelson Clark 8-3-88
Signature

OWNER
Howard Research & Development Corp
10275 Little Patuxent Pkwy
Columbia, MD 21044

Abraham L. Shuler 3/29/89
Signature of Developer

DESIGNED MCB	SEDIMENT & EROSION CONTROL PLAN LOTS C-1 thru C-88 COLUMBIA VILLAGE OF LONGREACH SECTION 3 AREA 2 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE None
DRAWN G9		DRAWING 5 of 7
CHECKED MCB		JOG NO 87-145
DATE JULY 14 1988	FOR COLUMBIA BUILDERS 3 LKEFRONT NORTH SUITE 200 COLUMBIA, MARYLAND 21044	FILE NO 87-1455E

SEC P 50 42

- SEDIMENT & EROSION CONTROL
1) A written notice must be given to the Maryland Office of Inspection and Permitting to U.S. Soil Conservation District (992-2437)
2) All work at the site must be in conformance with the 1981 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (MSSC) and the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (SC) and temporary seedings (TSC).
3) It is illegal to do any structural practice, i.e., to build a wall, fence, or other structure, in or adjacent to the project area of this plan. It is illegal to do any work in or adjacent to the project area of this plan in accordance with the 1981 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (MSSC) and the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (SC) and temporary seedings (TSC).
4) Following initial soil disturbance or redisturbance permanent or temporary stabilization shall be completed within 1) 7 calendar days for all permanent sediment traps, structures, and slopes over 31% slopes and all slopes over than 31%; b) 14 days as to all other disturbed or graded areas on the project site.
5) All sediment traps/haywains 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.
6) All disturbed areas are to 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 (SC) and temporary seedings (TSC).
7) Site Analysis:
Total Area of Site 9.05 Acres
Area D. turbid 8.95 Acres
Area to be profled or paved 2.82 Acres
Area to be effectively stabilized 6.20 Acres
Total Cut 18,790 Cu yds
Total Fill 22,620 Cu yds
Offsite Waste/Surface Debris 0 Cu yds
n/a
8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired or reseeded as soon as possible.
9) Additional sediment control must be provided, if deemed necessary by the Howard County DEP sediment control inspector.
10) All sites with disturbed areas in excess of 3 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with other building, grading, disturbance, dredging, or other activities. Sediment trap inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11) If houses are to be constructed on "As-Sold" basis, at least one lot must be Sediment Control as shown below be implemented.
12) All pipes to be blocked at the end of each day (see detail below).
13) The total amount of straw bale dikes/silt fence equals 765 LF.

CONSTRUCTION SEQUENCE	NO. OF DAYS
A Complete step no. 8 in construction sequence for F88-237	60 Days
B Excavate for foundations, rough grade & temp. stabilize	300 Days
C Construct structures, sidewalks and driveways	
Delay construction of house on Lot 24 until removal of sediment trap No. 3	
D Final grade and stabilize in accordance with standards and specs	5 Days
E Upon approval of the sediment control inspector, flush storm drain system, remove sediment control measures complete storm drainage construction & stabilize	7 Days
F Restore areas near sediment traps to final grade and complete construction on Lot 24 utilizing silt fence as necessary. All disturbed areas to be immediately stabilized.	14 Days

KEY	PLANT NAME	W.E.	INT.	ELIMINATOR
	SHRUBS - HEDGES			
(+)	Acacia - acacia - white acacia tree	22	10	-
(+)	Afghan - afghan - black mulberry	30	-	-
(+)	Anacardium - anacardium - cashew tree	15	-	-
(+)	Artemesia - artemesia - wormwood	12	-	-
(+)	Bixa - bixa - annatto tree	9	-	-
(+)	Citrus - citrus - orange tree	2	-	-
(+)	Elaeis - elaeis - palm oil tree	13	-	-
	FLUSHING EVERGREEN TREES			
(+)	Acacia - acacia - acacia tree	22	10	-
(+)	Argyroxiphium - argyroxiphium - Pittosporum - Pittosporum	2	-	-
(+)	Artemesia - artemesia - wormwood	9	-	-
(+)	Buxus - buxus - boxwood	21	-	-
(+)	Citrus - citrus - orange tree	23	-	-
(+)	Cinnamomum - cinnamomum - cinnamon tree	15	-	-
(+)	Fraxinus - fraxinus - ash tree	22	-	-
(+)	Hedera - hedera - ivy	50	-	OAK

FOR CONTINUATION
SEE SHEET 7 OF



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT	
<i>Howard J. Snyder</i> COUNTRY HEALTH OFFICER	4-11-89 DATE
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING	
<i>John R. Smith</i> PLANNING DIRECTOR	4-28-89 DATE
<i>Mark J. Langley</i> CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	7/28/89 DATE LKS
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>Tom McLean</i> DIRECTOR	46789 DATE
<i>William E. Reiley</i> CHIEF BUREAU OF ENGINEERING	4-7-89 DATE

9-28-83
LKS

382
OWNER
Howard Research & Development Corp
P.O. Box 1400, the Potomac, Maryland

SUBDIVISION NAME COLUMBIA-1				SECT AREA 3 2	LOTS C-1 C88
PLAT NO 8457-8458	BLOCK # 7	ZONE NT ATT	TAX/ZONE MAP 37	ELEC DIST 6TH	CENSUS 606502
WATER CODE E07			SEWER CODE 3550000		

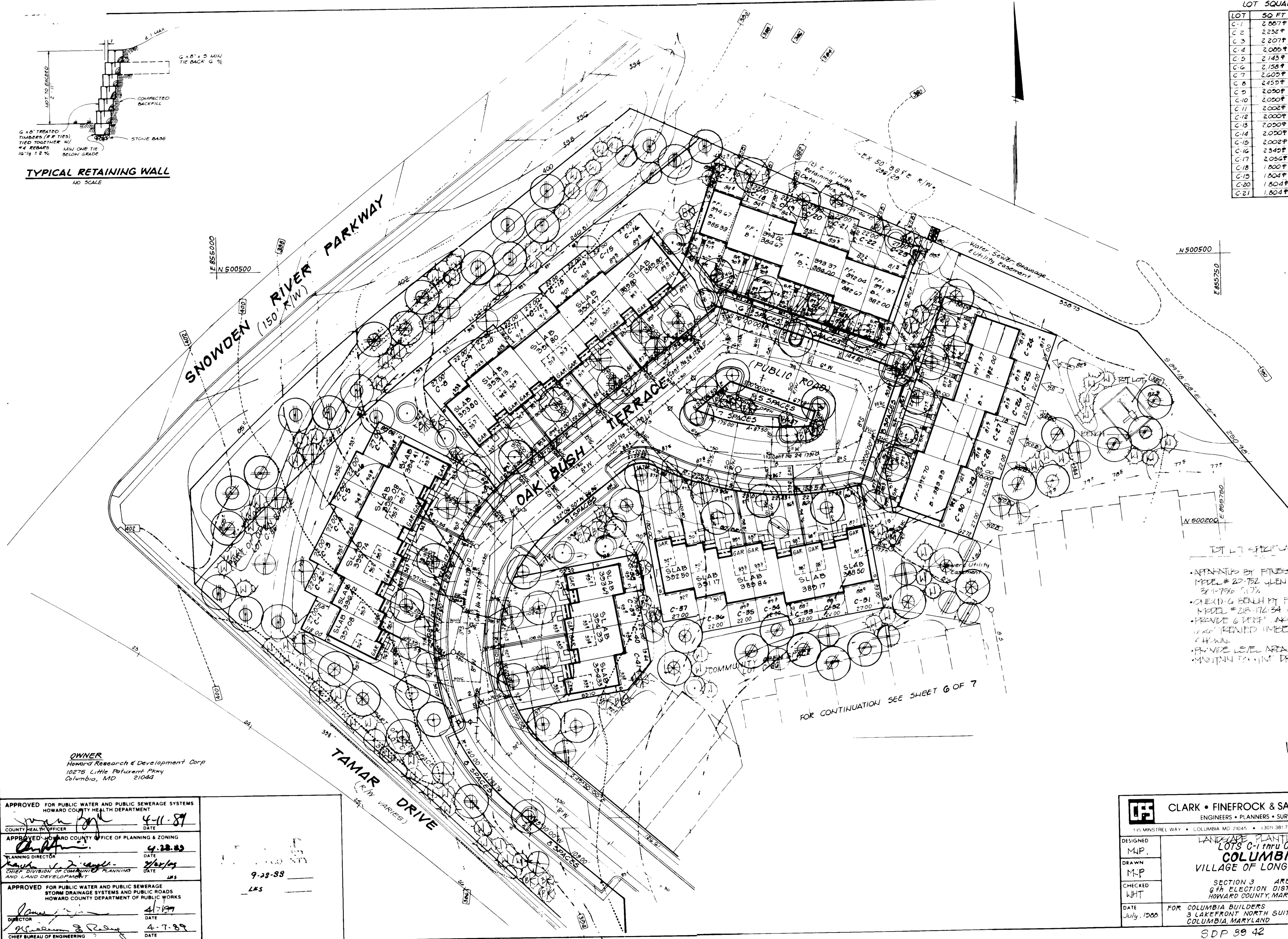
CLARK • FINEFROCK & SACKETT, INC

ENGINEERS • PLANNERS • SURVEYORS

		LOT C-1 THRU C-88				SCALE 1"=30'
		COLUMBIA VILLAGE OF LONGREACH				DRAWING 6 OF 7
		SECTION 3 AREA 2 6TH ELECTION DISTRICT HOWARD COUNTY MARYLAND				JOB NO 87-145
FOR		COLUMBIA BUILDERS LAKEFRONT NORTH SUITE 200 COLUMBIA, MARYLAND 21044				FILE NO 87 +
ED		COLUMBIA				
ED		VILLAGE OF LONGREACH				
ED		SECTION 3 AREA 2				
ED		6TH ELECTION DISTRICT				
ED		HOWARD COUNTY MARYLAND				
DRP		COLUMBIA BUILDERS				
DRP		LAKEFRONT NORTH SUITE 200				
DRP		COLUMBIA, MARYLAND 21044				

SDP 89 42

LOT	SQ FT	LOT	SQ FT
C-1	2,887 ⁺	C-22	1,624 ⁺
C-2	2,232 ⁺	C-23	2,079 ⁺
C-3	2,207 ⁺	C-24	2,376 ⁺
C-4	2,085 ⁺	C-25	1,936 ⁺
C-5	2,143 ⁺	C-26	1,936 ⁺
C-6	2,158 ⁺	C-27	1,826 ⁺
C-7	2,609 ⁺	C-28	1,826 ⁺
C-8	2,459 ⁺	C-29	1,716 ⁺
C-9	2,090 ⁺	C-30	1,900 ⁺
C-10	2,090 ⁺	C-31	2,499 ⁺
C-11	2,002 ⁺	C-32	2,057 ⁺
C-12	2,000 ⁺	C-33	2,128 ⁺
C-13	2,090 ⁺	C-34	2,096 ⁺
C-14	2,090 ⁺	C-35	2,271 ⁺
C-15	2,002 ⁺	C-36	2,508 ⁺
C-16	2,349 ⁺	C-37	3,117 ⁺
C-17	2,056 ⁺	C-38	2,734 ⁺
C-18	1,800 ⁺	C-39	2,325 ⁺
C-19	1,804 ⁺	C-40	2,394 ⁺
C-20	1,804 ⁺	C-41	2,707 ⁺
C-21	1,804 ⁺		



OWNER
Howard Research & Development Corp
10275 Little Patuxent Pkwy
Columbia, MD 21044

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT	
<u>Joyce Byn</u>	4-11-89 DATE
COUNTY HEALTH OFFICER	
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING <u>Chris Brown</u>	
PLANNING DIRECTOR	4-28-89 DATE
<u>Mark V. Ziegler</u>	
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	2/28/89 DATE
LKS	
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<u>James J. Hines</u>	4-7-89 DATE
DIRECTOR	
<u>William G. Reiley</u>	4-7-89 DATE
CHIEF BUREAU OF ENGINEERING	

CFS	CLARK • FINEFROCK & SACKETT, INC.	
	ENGINEERS • PLANNERS • SURVEYORS	
135 MINSTREL WAY • COLUMBIA MD 21045 • (301) 381 7200 – BALTO • (301) 621 8100 WASH		
DESIGNED MNP.	LANDSCAPE PLANTING PLAN LOTS C-1 thru C-88 COLUMBIA VILLAGE OF LONGREACH	SCALE 1"=30
DRAWN MNP		DRAWING 7 OF 3
CHECKED WHT	SECTION 3 AREA 2 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO 87-145
DATE July, 1988	FOR COLUMBIA BUILDERS 3 LAKEFRONT NORTH SUITE 200 COLUMBIA, MARYLAND 21044	FILE NO 87-145