

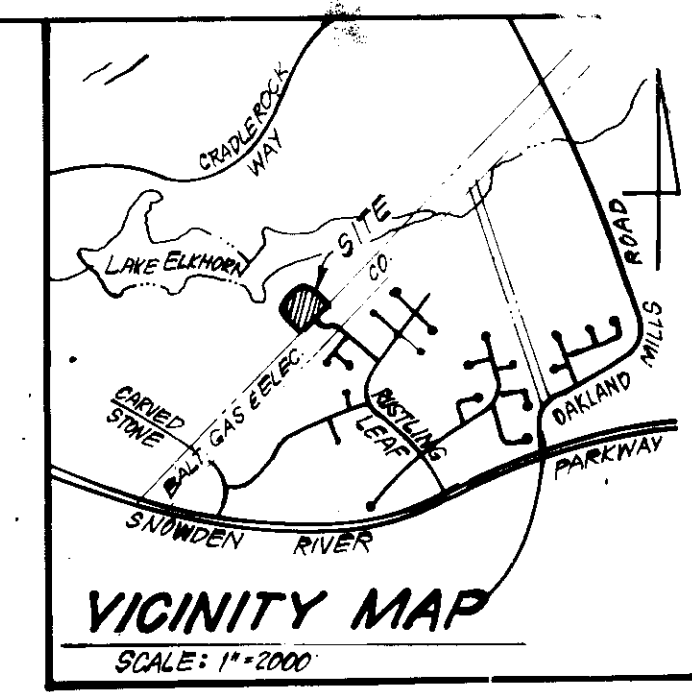
Note: Provide 2" Al. CSP Vapa. W/land sections under relocated pathway. Inverts and location of 2" Al. CSP to be shown in field to minimize disturbance of existing vegetation.

Relocation of existing pathway and exercise pit to be coordinated with the owner, Columbia Park, a Recreation Association.

ZONED NEWTOWN OPEN SPACE
THE HOWARD RESEARCH & DEVELOPMENT CORP.
L. 463 F. 136

UNIT MIX AREA SCHEDULE			
GARDEN LEVEL (GROUND FLOOR)	UNIT TYPES		
	A (END)	B (MID)	C (MID)
22	3 (1,215 #)	3 (1,185 #)	10 (1,235 #)
18	6 (1,160 #)	1 (1,185 #)	10 (1,185 #)
FENTHOUSE W/LOFT (SECOND FLOOR)	3 (1,800 #)	6 (1,255 #)	3 (1,580 #)
TOTALS	62 Units (84,925 sq ft)		

SITE ANALYSIS	
1. Zoning: New Town Apartments	62
2. Number of Units Permitted:	62
3. Number of Units Proposed:	62
4. Parking Required: (2/Unit)	124
5. Parking Proposed:	124
6. Area Tabulation:	
Total Area of Parcel:	3,880 Ac.
Roadway Dedication:	0. AC
Area of Community Owned Lots:	3,300 Ac.
7. Building Coverage:	17% (0.66 Ac.)



- LEGEND:**
- 1. Contour Interval: 2 Ft.
 - 2. Existing Contour: ---
 - 3. Proposed Contour: - - -
 - 4. Spot Elevation: +105
 - 5. Direction of Drainage: --->
 - 6. Existing Trees to be Saved: (Symbol)
 - 7. Proposed Storm Drain: (Symbol)
 - 8. Proposed Sewer: (Symbol)

LAKE ELKHORN

Ex. 7286

Ex. 7285

Ex. 7284

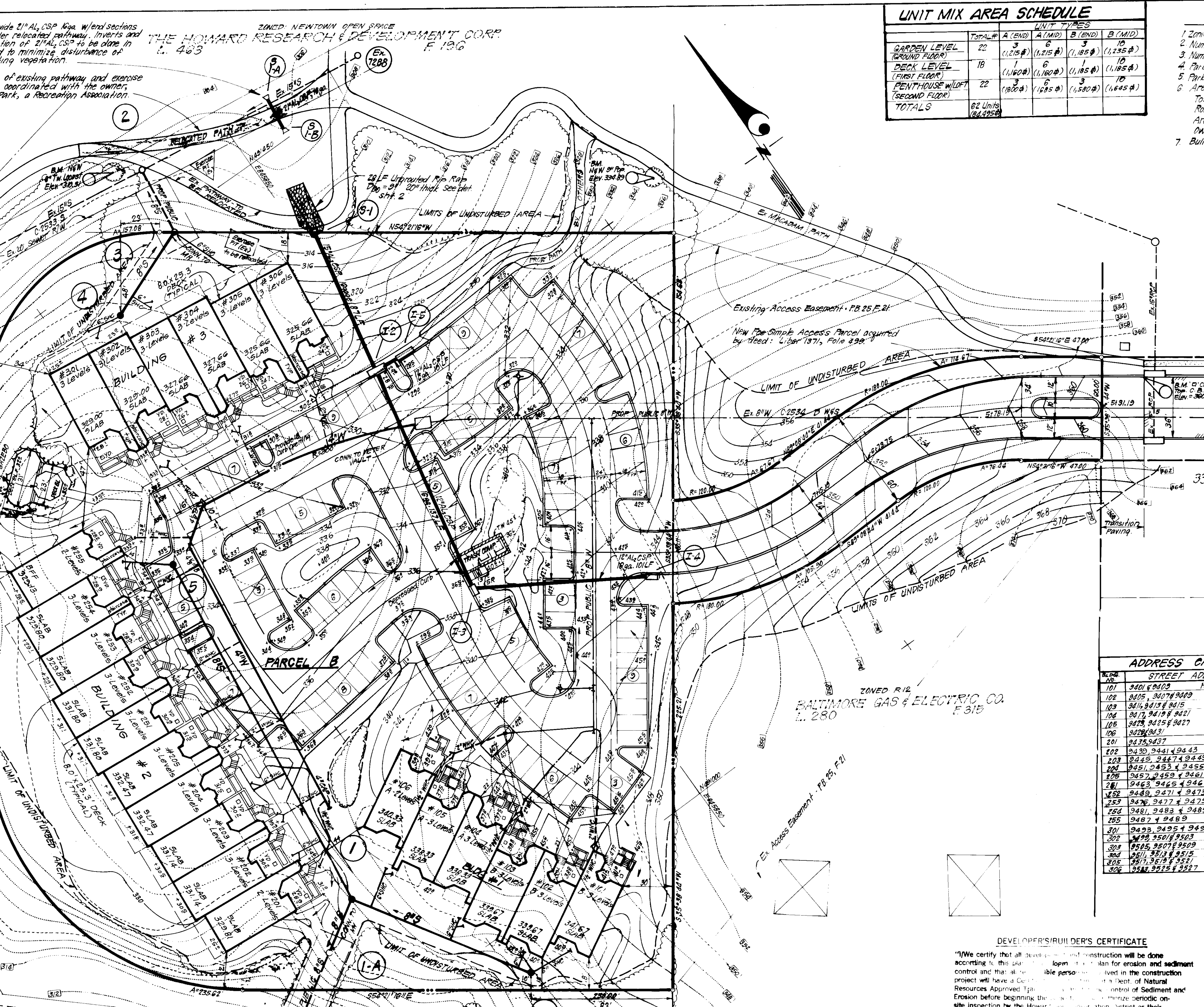
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
Joseph E. Brien 11-14-85
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John W. Mulholland 11-15-85
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John W. Mulholland 8-7-85
DATE

DIRECTOR
John W. Mulholland DATE

CHIEF BUREAU OF ENGINEERING
John W. Mulholland DATE



ZONED NEWTOWN SFD
VILLAGE OF OWEN BROWN
SECTION 2 AREA 3
PB 25 F.21
326 41

HICKORY LIMB

GENERAL NOTES

- All materials and construction to be in accordance with Howard County Road Construction Code and Specifications.
- This plan is covered by Final Development Plan Phase 118-2, Part III.
- Any damage to county owned rights of way to be corrected at the developer's expense.
- Installation of traffic control devices shall be in accordance with the latest edition of the "Manual of Uniform Traffic Control".
- Topography was compiled from actual field survey.
- The area shown is located on Tax Map #42, Parcel B, P.P. Parcel #40.
- All drive ways and parking to be privately owned and maintained.
- All coordinates are based on the Maryland State Grid System.
- Class "C" Trench bedding shall be used under all storm drainage, unless shown otherwise.
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location by digging test pits, by hand, at all utility crossings, well in advance of construction.
- The contractor or developer shall contact the Construction Inspection, Survey Division 48 hrs. in advance of work 999 2417 or 792 7272.
- All downspout drains shall be handled by one of these methods:
A. Downspout to splash blocks and discharged to ground having good percolation.
B. Downspout in front of units piped to curb.
C. Downspout connected to storm drain.
- The developer agrees to work with the Dept. of Licenses & Inspection to resolve any problems caused by roof water discharge.
- Storm Water Management provided by a Central Facility at Lake Elkhorn as per letter of agreement w/ Ho. Co. Dept. of Public Works, dated Sept. 19, 1977.
- All set backs requirements and criteria as shown in F.D.P. 3054 A-510.

ADDRESS CHART	
LOT NO.	STREET ADDRESS
101	9401 & 9402 Hickory Limb
102	9405, 9407 & 9409
103	9414, 9415 & 9415
104	9417, 9419 & 9421
105	9423, 9425 & 9427
106	9428 & 9431
201	9435 & 9437
202	9439, 9441 & 9443
203	9445, 9447 & 9449
204	9451, 9453 & 9455
205	9457, 9459 & 9461
206	9463, 9465 & 9467
207	9469, 9471 & 9473
208	9475, 9477 & 9479
209	9481, 9483 & 9485
210	9487 & 9489
301	9493, 9495 & 9497
302	9499, 9501 & 9503
303	9505, 9507 & 9509
304	9511, 9513 & 9515
305	9517, 9519 & 9521
306	9523, 9525 & 9527

ZONED R12
BALTIMORE GAS & ELECTRIC CO.
L. 280 F. 315

DEVELOPER'S/OWNER'S CERTIFICATE
"I/We certify that all development and construction will be done according to this plan and that the plan for erosion and sediment control and that all responsible persons involved in the construction project will have a Certificate of Approval from the Dept. of Natural Resources Approved Type III plan for erosion and sediment control on site inspection by the Howard County Dept. of Public Works or their authorized agents, as are deemed necessary."

Reviewed for: *Howard* S.U.
Signature: *Howard* 11-6-85
DATE

Signature: *W. J. Mulholland* 10-22-85
DATE

ENGINEER'S CERTIFICATE
"I/We 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: *G. Nelson Clark* 10-22-85
DATE

REVISED FOOTPRINT OF BLDGS # 2 & 3	7-1-87	
NO.	REVISION	DATE
1		

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORP.
10075 Little Patuxent Parkway, Columbia, Md. 21044

DATE: 8-7-85

CLARK • FINEFROCK & SACKETT
ENGINEERS • PLANNERS • SURVEYORS
11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 (301) 593-3400

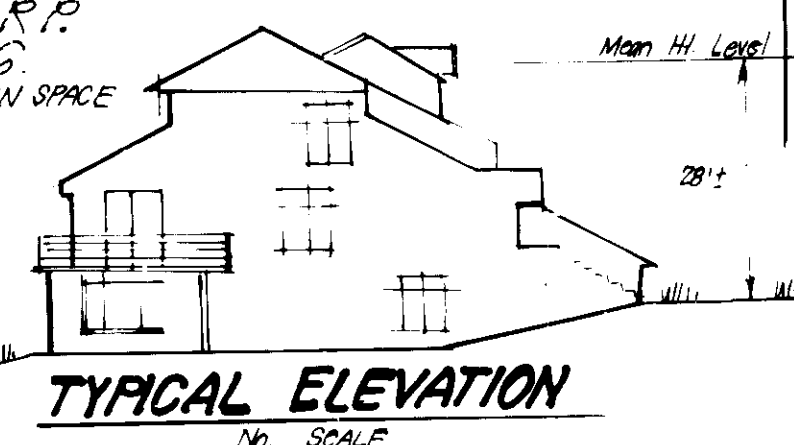
DESIGNED: [Signature]
DRAWN: [Signature]
CHECKED: [Signature]
DATE: JULY, 1985

SITE DEVELOPMENT PLAN
PARCEL "B"
COLUMBIA
VILLAGE OF OWEN BROWN
SECTION 2 AREA 3
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: TROUTMAN CO., INC.
Wild Lake Village Green #300
Columbia, Md. 21044

SCALE: 1"=30'
DRAWING: 10F5
JOB NO.: 85-003
FILE NO.: 85-003-X

SDP-86-15c



Note: Provide 21" AL CSP Area 4/12 sections under relocated pathway, inverts and location of 21" AL CSP to be done in field to minimize disturbance of existing vegetation.

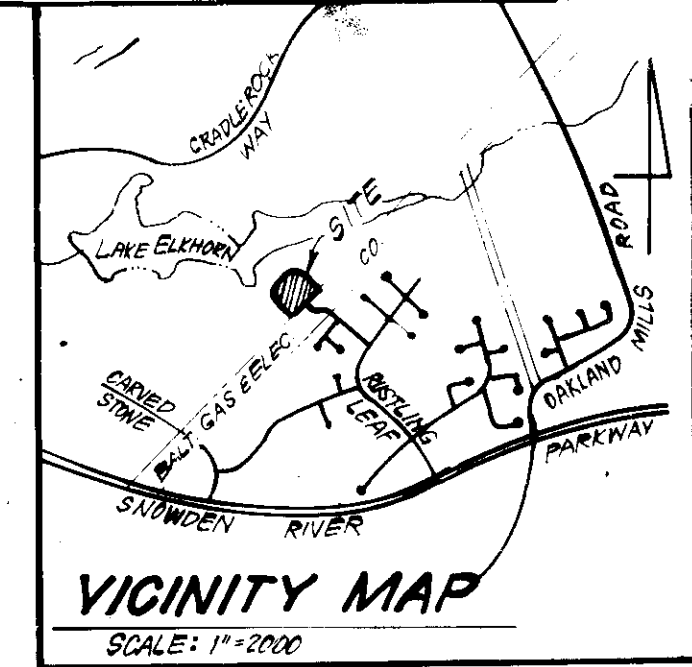
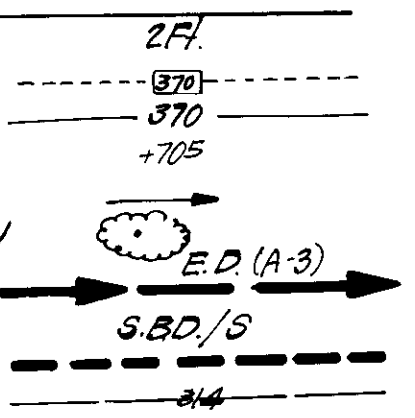
Relocation of existing pathway and exercise pit to be coordinated with the owner, Columbia Park, a Recreation Association.

THE HOWARD RESEARCH & DEVELOPMENT CORP.
E 196
463

TRAP #1 SOST (ST.V)
DA = 4.3 Acres
Storage Required = 4.3(1800) = 7740 CF
Depth = 4'
Top of Slope Crest = 321.0
Bottom Elevation = 316.0
Bottom Dimensions = 37' x 35'
Clean Cut Elevation = 318.0

LEGEND:

1. Contour Interval
2. Existing Contour
3. Proposed Contour
4. Spot Elevation
5. Direction of Drainage
6. Exist. Trees to be Saved
7. Earth Dike
8. Straw Bale Dike or Silt Fence
9. Temporary Grading



LAKE ELKHORN

Ex 7286

Ex 7285

Ex 7284

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
John Byler 11-14-85
DATE

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING
William M. ... 11-15-85
DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
... 11-8-85
DATE

CHIEF BUREAU OF ENGINEERING

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 8-7-85
M. Quinn

THE HOWARD RESEARCH & DEVELOPMENT CORP.
E 196
463

HOWARD COUNTY SOIL CONSERVATION DISTRICT
Name: Howard
Signature: *...* 11-6-85
Date

APPROVED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT
Stephen L. Fisher 11-6-85
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.
G. Nelson Clark 7-17-85
Date

OWNER: The Howard Research & Development Corp
10275 Little Patuxent Parkway
Columbia, Maryland 21044

CLARK · FINEFROCK & SACKETT
ENGINEERS · PLANNERS · SURVEYORS
11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400

DESIGNED: WHT
DRAWN: WHT
CHECKED: KIW
DATE: July 1985

SCALE: 1"=30'
DRAWING: 30F-5
JOB NO.: 85-003
FILE NO.: 85-003-9E

SEDIMENT & EROSION CONTROL PLAN
PARCEL "B"
COLUMBIA
VILLAGE OF OWEN BROWN
SECTION 2 AREA 3
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: TROUTMAN CO., INC.
Wild Lake Village Green #300
Columbia, Md. 21044

SDP-86-15.

CONSTRUCTION SEQUENCE:

No. of Days	
2	1. Obtain Grading Permit.
14	2. Install S.B.D./S and relocate pathway and exercise pits; Construct 21" AL CSP under pathway. Immediately stabilize the area disturbed during pathway relocation. Existing pathway and exercise pits to remain in operation until they are replaced by the new path and exercise pits.
14	3. Construct sediment & erosion control measures.
14	4. Clear & Rough Grade Site.
7	5. Construct storm drainage except Str. I-5 to I-2 and install Temp. 15" CMP Brick shut 15" AL CSP between Str. I-2 and Str. S-1.
28	6. Construct Utilities.
120	7. Fine Grade and construct Blags and Paving, except paving in area of Trap #1.
14	8. Stabilize all other disturbed areas onsite in accordance with Stds. & Specs.
1	9. Flush storm drainage prior to removal of Trap #1.
7	10. Upon approval of the Sediment Control Inspector, remove sediment & erosion control measures and stabilize.
14	11. Construct the remaining storm drainage & paving and block Inlet I-5 and install S.B.D./S as necessary.

DEVELOPER'S/BUILDER'S CERTIFICATE

"We certify that all development and construction will be done according to this plan for erosion and sediment control and that all erosion and sediment control on the construction project will have a certain amount of Natural Resources Approved Training and Certification of Sediment and Erosion before beginning the project. We will have periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

Donald A. McHenry 7-16-85
Signature of Developer/Builder Date

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing 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.
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.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 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.

Mulching - Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas.

Inspection - Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

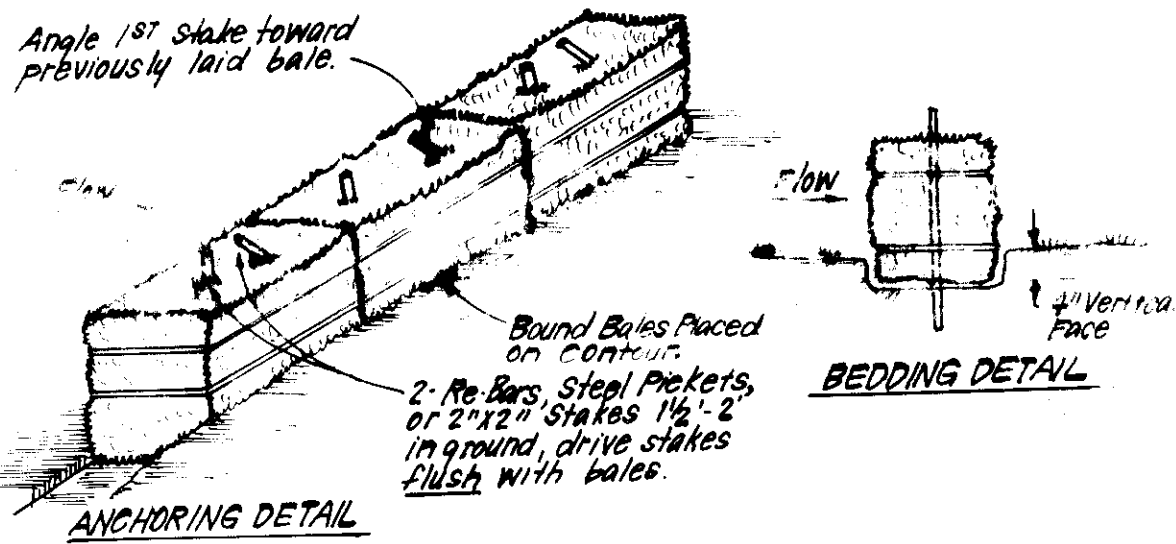
Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Apply 600 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 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft).

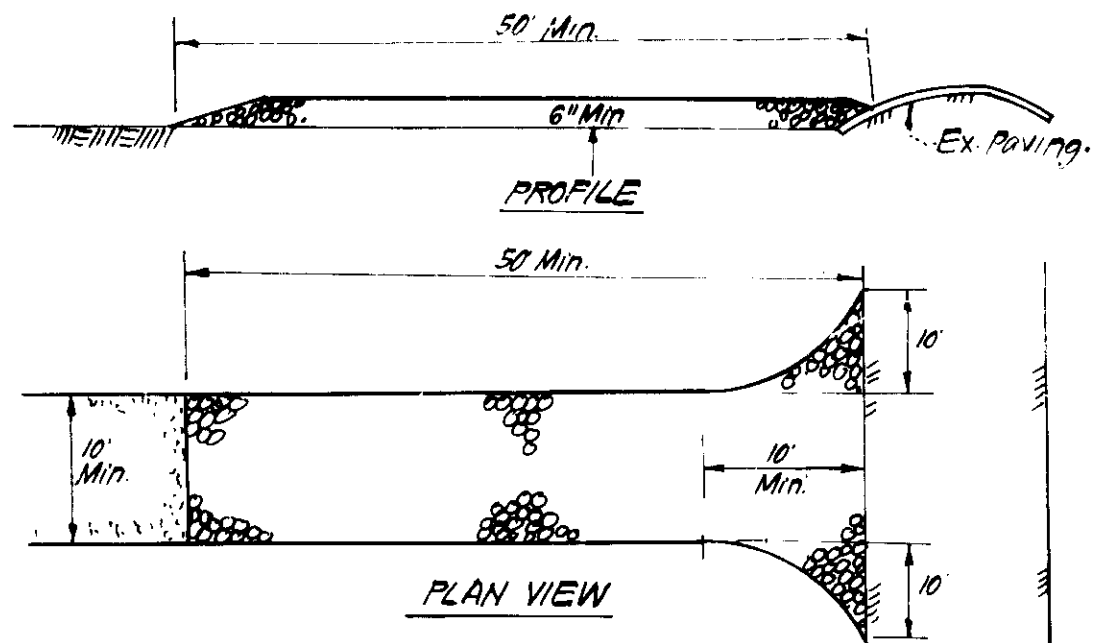
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



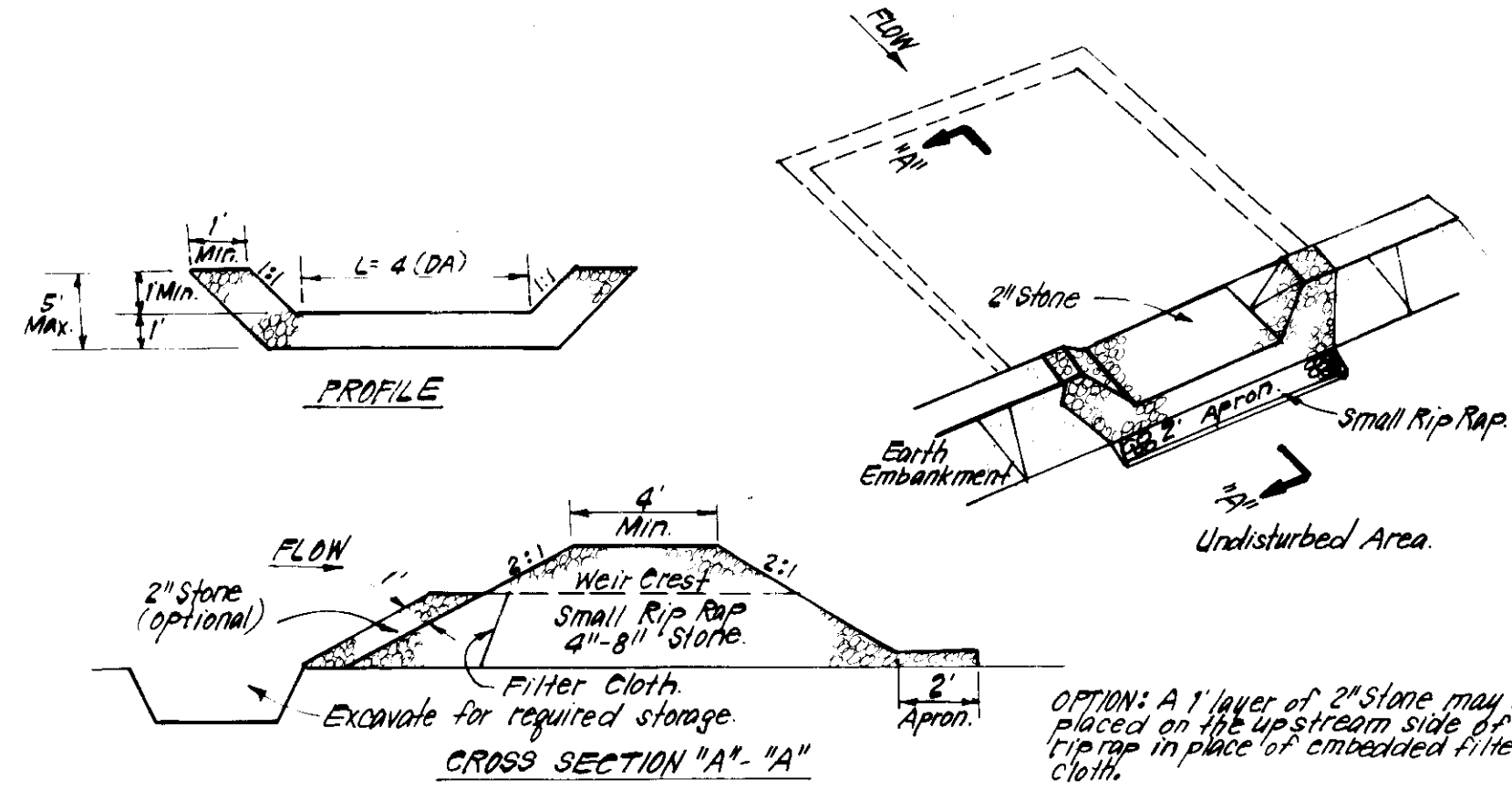
- CONSTRUCTION SPECIFICATIONS:
1. Bales shall be placed at the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a min. of 4" and placed so the bindings are horizontal.
3. Bales shall be securely anchored in place by either 2 stakes or re-bars driven thru the bale.

STRAW BALE DIKE DETAIL (SBD)



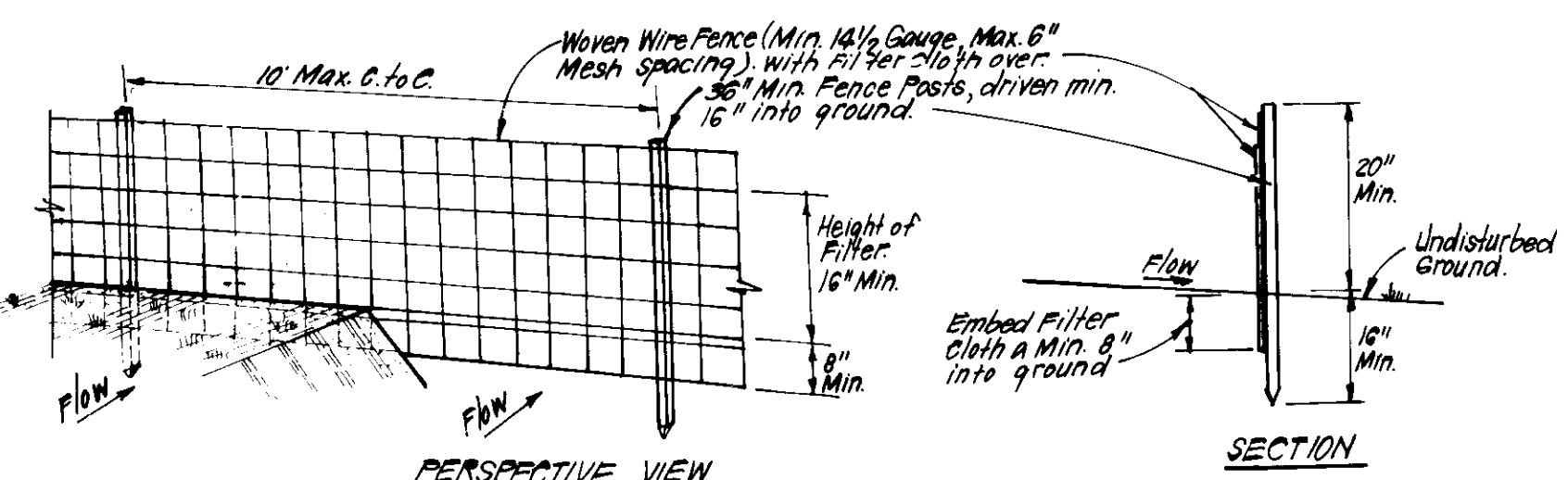
- CONSTRUCTION SPECIFICATIONS:
1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 130' min length would apply).
3. Thickness - Not less than 6".

STABILIZED CONSTRUCTION ENTRANCE (S.C.E)



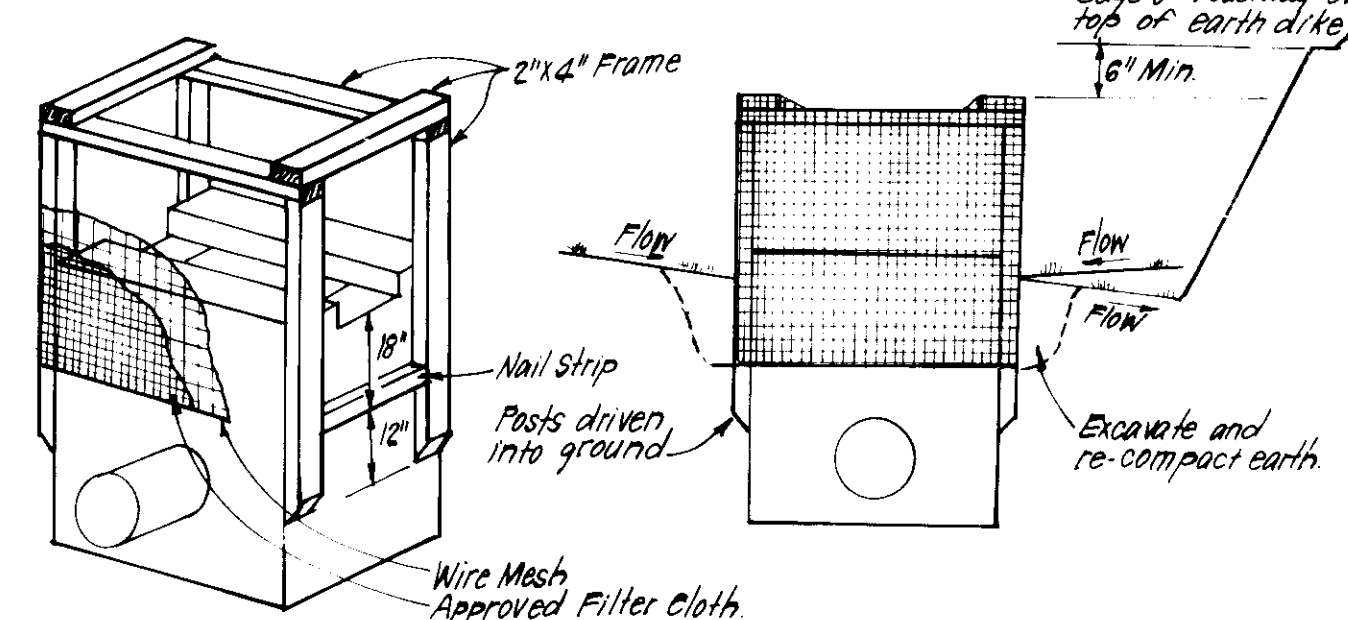
- CONSTRUCTION SPECIFICATIONS:
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and roof mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks or any material or other objectionable material.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) ST.V.

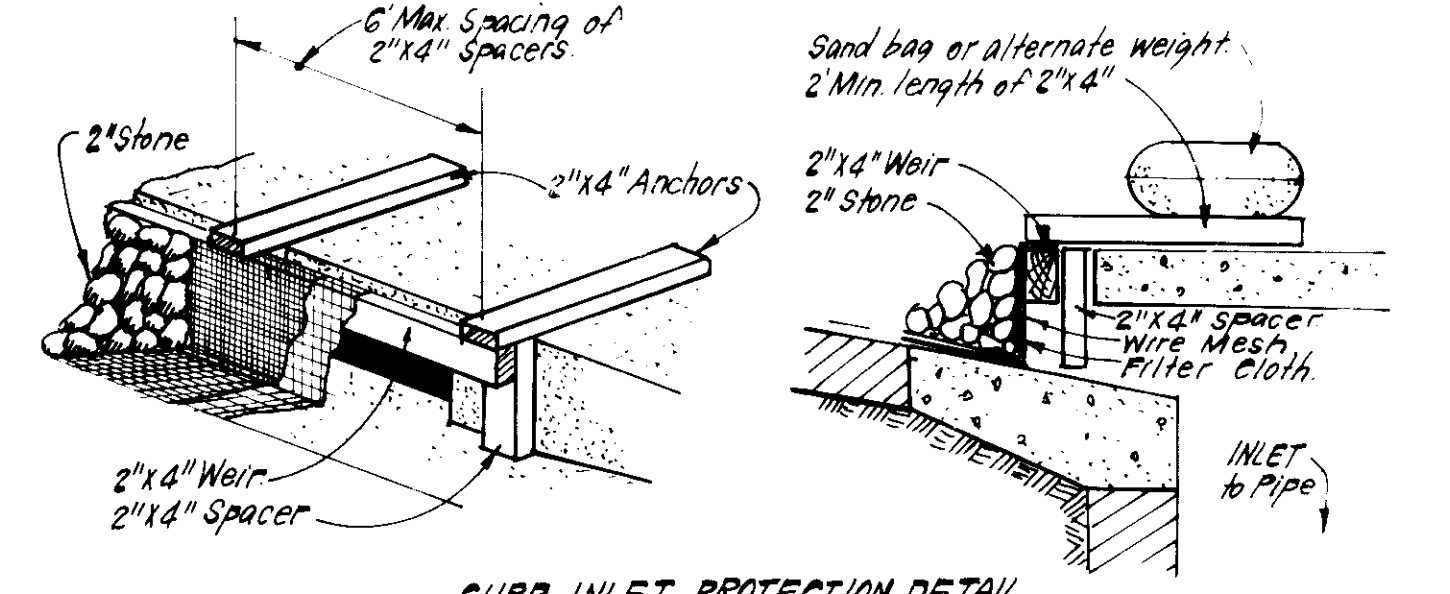


- CONSTRUCTION SPECIFICATIONS:
1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.

SILT FENCE DETAIL (S)



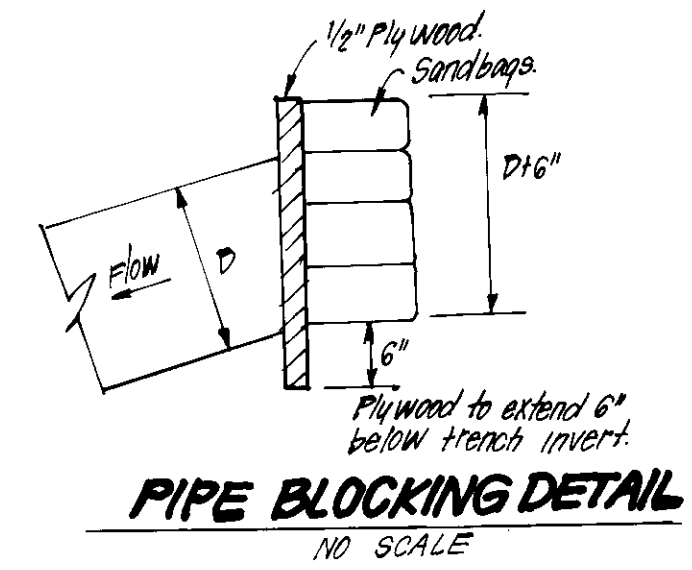
SWALE INLET PROTECTION DETAIL



CURB INLET PROTECTION DETAIL

- CONSTRUCTION SPECIFICATIONS:
I. MATERIALS: A. Wooden frame is to be constructed of 2"x4" construction grade lumber.
B. Wire mesh must be of sufficient strength to support filter fabric and stone for curb inlets, with water fully impounded against it.
II. PROCEDURE: SWALE, DITCHLINE OR YARD/INLET PROTECTION
1. Excavate completely around inlet to a depth of 18" below notch elevation.

INLET PROTECTION DETAIL (I.P.D.)



PIPE BLOCKING DETAIL

- SEEDING GENERAL NOTES:
1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction.
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done according to the plan and specifications for erosion and sediment control... and meets Technical Requirements...

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 County Department of Public Works...

Approval stamps and signatures for 'Reviewed for' and 'Developer's/Builder's Certificate'.

Professional seal and title block for CLARK, FINEFROCK & SACKETT ENGINEERS, PLANNERS - SURVEYORS.

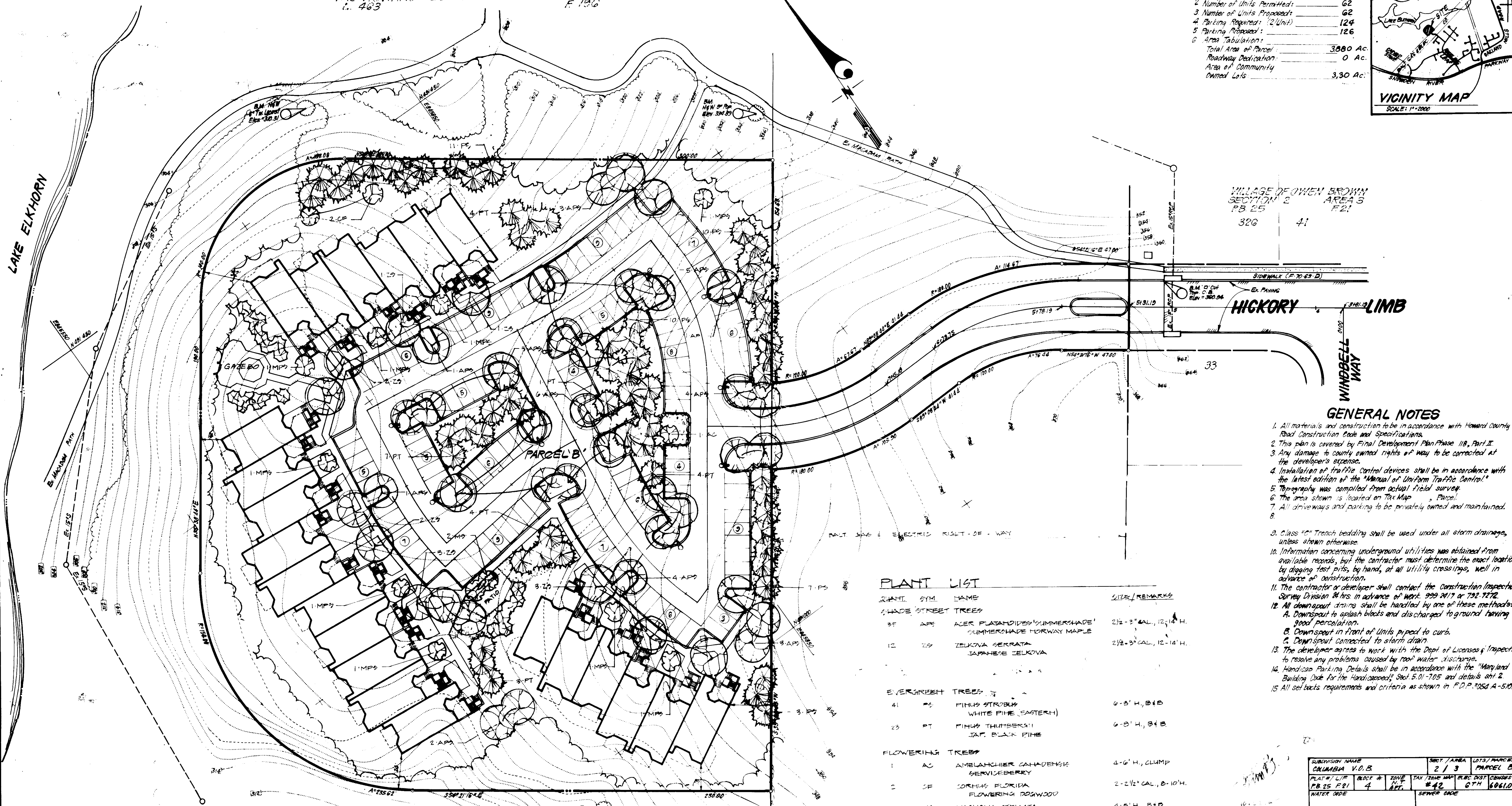
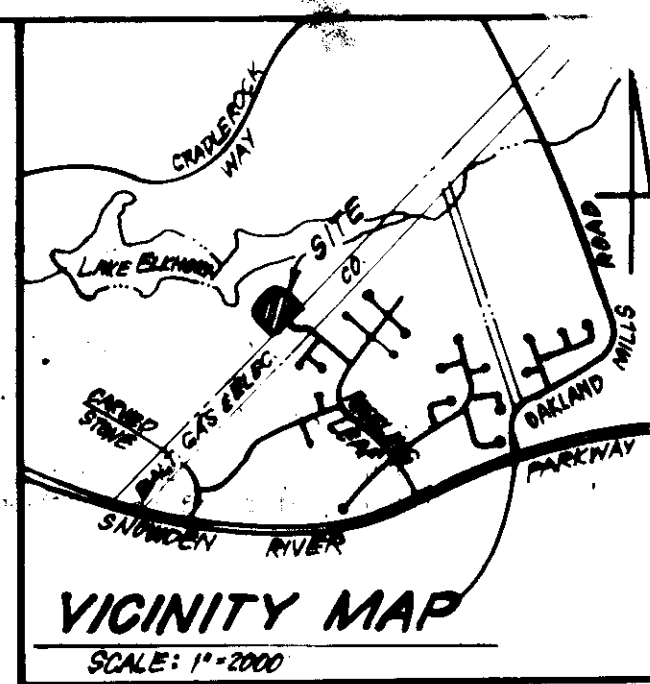
Approval stamps from Howard County Health Department, Planning Board, and Bureau of Engineering.

THE HOWARD RESEARCH & DEVELOPMENT CORP.
L. 463 F. 196

SITE ANALYSIS

1. Zoning: New Town Apartments	
2. Number of Units Permitted:	62
3. Number of Units Proposed:	62
4. Parking Required: (2/Unit)	124
5. Parking Proposed:	126
6. Area Tabulation:	
Total Area of Parcel:	3880 Ac.
Roadway Dedication:	0 Ac.
Area of Community Owned Lots:	3.30 Ac.

VICINITY MAP
SCALE: 1"=2000'



VILLAGE OF OWEN BROWN
SECTION 2 AREA 3
PB 25 F 21
326 41

HICKORY LIMB
WINDBELL WAY

GENERAL NOTES

- All materials and construction to be in accordance with Howard County Road Construction Code and Specifications.
- This plan is covered by Final Development Plan Phase 1/B, Part II.
- Any damage to county owned rights of way to be corrected at the developer's expense.
- Installation of traffic control devices shall be in accordance with the latest edition of the "Manual of Uniform Traffic Control."
- Topography was compiled from actual field survey.
- The area shown is located on Tax Map Parcel 33.
- All driveways and parking to be privately owned and maintained.
-
- Class 10" Trench bedding shall be used under all storm drainages, unless shown otherwise.
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location by digging test pits, by hand, at all utility crossings, well in advance of construction.
- The contractor or developer shall contact the Construction Inspection, Survey Division 84 hrs in advance of work, 999 2117 or 792 7272.
- All downspout drains shall be handled by one of these methods:
 - Downspout to splash blocks and discharged to ground having good permeation.
 - Downspout in front of units piped to curb.
 - Downspout connected to storm drain.
- The developer agrees to work with the Dept. of Licenses & Inspection to resolve any problems caused by roof water discharge.
- Handicap Parking Details shall be in accordance with the "Maryland Building Code for the Handicapped," Sect. 5.01-7.05 and details shd. 2.
- All set backs requirements and criteria as shown in F.D.P. 3054 A-5.10.

PLANT LIST

QUANT.	SYM.	NAME	SIZE/REMARKS
SHADE STREET TREES			
35	AP	ACER PLATANOIDES 'SUMMERSHADE'	2 1/2 - 3" CAL., 12-14' H.
		SUMMERSHADE NORWAY MAPLE	
12	ZS	ZELKOVA SERRATA	2 1/2 - 3" CAL., 12-14' H.
		JAPANESE ZELKOVA	
EVERGREEN TREES			
41	PS	FINUS STROBUS	6-8' H., B 4 B
		WHITE PINE (EASTERN)	
23	PT	FINUS THUNBERGII	6-8' H., B 4 B
		JAP. BLACK PINE	
FLOWERING TREES			
1	AC	AMELANCHIER CANADENSIS	4-6' H., CLUMP
		SERVICEBERRY	
2	CF	CORNUS FLORIDA	2-2 1/2" CAL., 8-10' H.
		FLOWERING DOGWOOD	
2	MS	YASHOLIA STELLATA	4-5' H., B 4 B
		STAR MAGNOLIA	
1	MPS	MALUS 'PINK SPIRES'	2-2 1/2" CAL., 8-10' H.
		PINK SPIRES FLOWERING CRAB	

SUBDIVISION NAME	COLUMBIA V.O.B.	SECT./AREA	2 / 3	LOTS/PARCEL	PARCEL B
PLAT #/L/F	PB 25 F 21	BLDG #	4	TAX ZONE MAP	#42
WATER CODE		SEWER CODE		ELC. DIST	6TH
				CENSUS TR.	6061.03

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
John G. Gyles 11-14-85
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
John M. Mullaney 11-16-85
PLANNING DIRECTOR DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE,
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter F. Norman 11-8-85
DIRECTOR DATE

ENGINEER
Cliff Bureau 11-16-85
CLIFF BUREAU OF ENGINEERING DATE

8-7-85
[Signature]

THE HOWARD RESEARCH & DEVELOPMENT CORP.
L. 463 F. 196

SLATER ASSOCIATES
SUITE 208 WILDE LAKE VILLAGE GREEN
COLUMBIA, MARYLAND 21044
LAND PLANNING
SITE PLANNING
LANDSCAPE ARCHITECTURE 992-0001

CLARK • FINEFROCK & SACKETT
ENGINEERS • PLANNERS • SURVEYORS
11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED: DEB
DRAWN: DEB
CHECKED: JES
DATE: 7-16-85

LANDSCAPE PLANTING PLAN
PARCEL "B"
COLUMBIA
VILLAGE OF OWEN BROWN
SECTION 2 AREA 3
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
FOR: TRUIMAN CO., INC.
Wilde Lake Village Green #300
Columbia, Md. 21044

SCALE: 1"=30'
DRAWING: 5 of 5
JOB NO.: 85-003
FILE NO.: 85-003-L3

SDP-86-15c