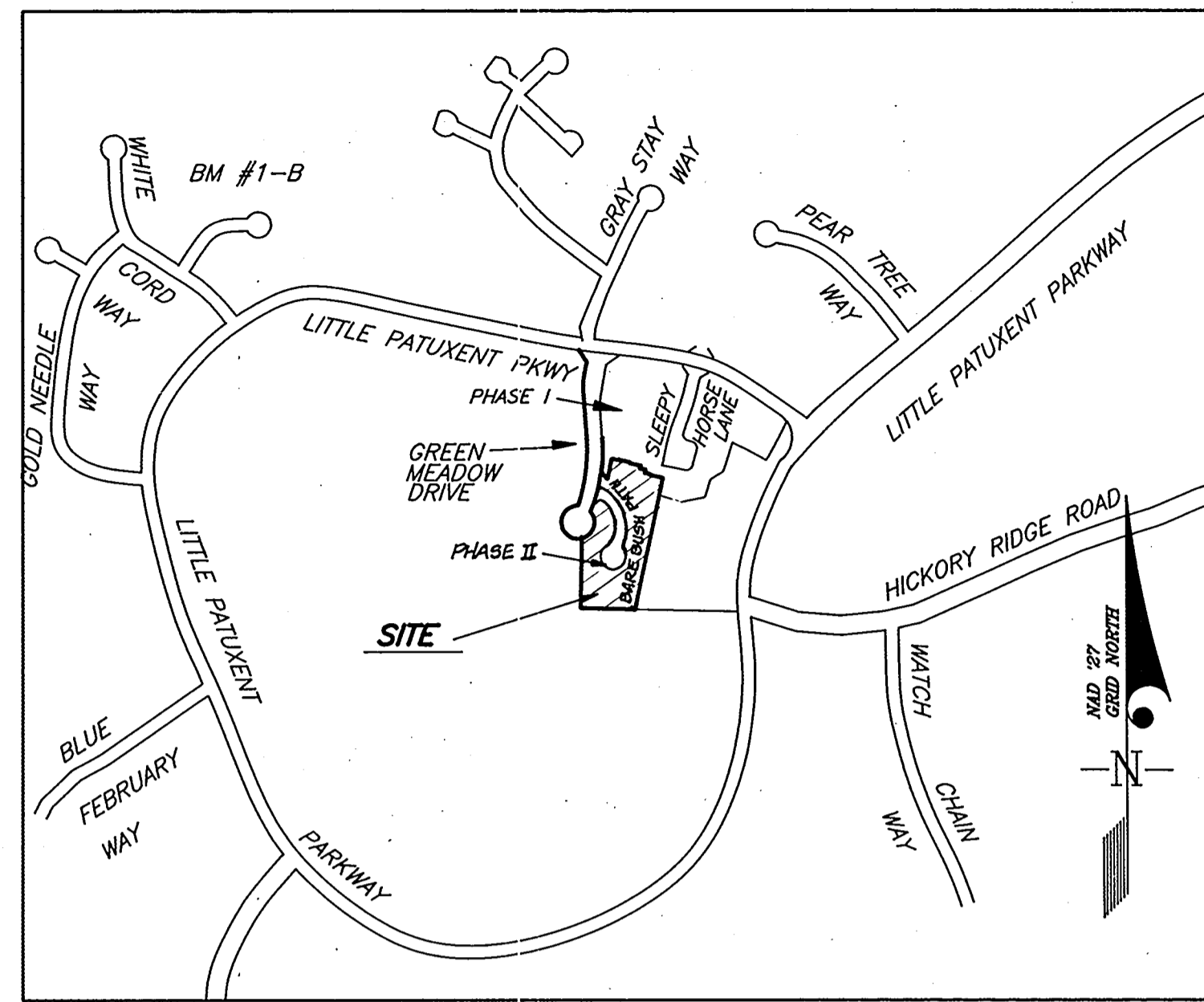
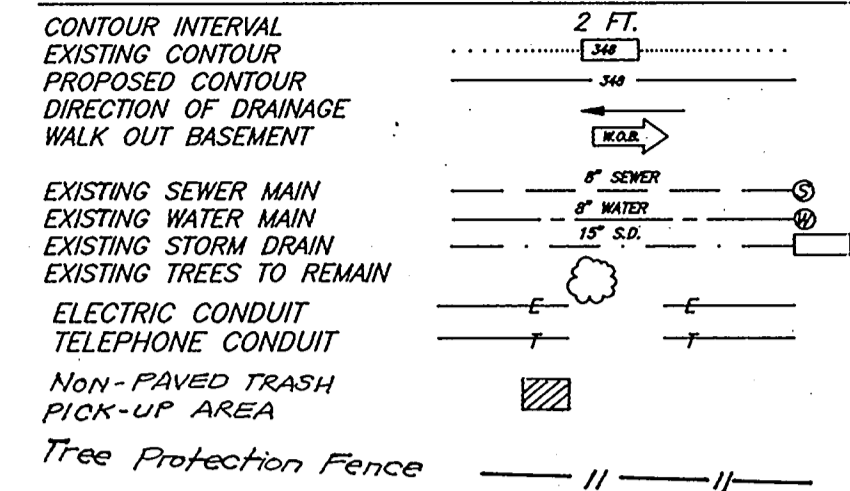


**LEGEND**



**VICINITY MAP**

SCALE: 1" = 600'

**LOT AREA TABLE**

LOT NO.	AREA
M-60	2106 SF
M-61	1804 SF
M-62	1828 SF
M-63	1831 SF
M-64	2003 SF
M-65	1997 SF
M-66	2154 SF
M-67	2849 SF
M-68	2128 SF
M-69	1760 SF
M-70	1716 SF
M-71	1716 SF
M-72	1628 SF
M-73	1988 SF
M-74	2025 SF
M-75	1650 SF
M-76	1650 SF
M-77	1650 SF
M-78	1606 SF
M-79	1971 SF
M-80	2052 SF
M-81	1672 SF
M-82	1716 SF
M-83	1716 SF
M-84	1890 SF
M-85	1971 SF
M-86	1661 SF
M-87	1661 SF
M-88	1705 SF
M-89	1705 SF
M-90	1661 SF
M-91	2038 SF
M-92	2091 SF
M-93	1774 SF
M-94	1767 SF
M-95	1766 SF
M-96	1834 SF
M-97	1914 SF
M-98	2208 SF
M-99	2368 SF
M-100	2094 SF
M-101	2008 SF
M-102	1999 SF
M-103	2190 SF

**SITE ANALYSIS:**

- Subject property is zoned: NT-SFA per 8/2/85 comprehensive zoning plan, FDP phase 181-A-III Part II
- Unit type proposed: Single family attached
- Number of units allowed: 44
- Number of units provided: 44
- Number of parking spaces required: 88 (2 per unit)
- Number of parking spaces provided: 91 (Total) Driveways and Garage: 40 Court: 51
- Area tabulation:
  - Total area of the parcel: 3.76 acres or 163,785 S.F.
  - Total lot area: 1.93 acres or 84,111 S.F.
  - Open space & private parking: 1.06 acres or 46,288 S.F.
  - Public road area: 0.77 acres or 33,716 S.F.
- Building coverage permitted: N/A
- Building coverage proposed: 1.03 acres or 45,000 S.F.

**GENERAL NOTES:**

- The existing topography shown was taken from approved road construction plan F-93-122 prepared by Clark Fierrock & Sackett, Inc.
- Department of Planning & Zoning reference file numbers: FDP Ph. 181-A-III Part II, SP-93-112, WP-93-58, F-83-120 and F-93-110, F-93-122
- All roadways are existing. Bare Bush Path is public and has one private court.
- The coordinates shown hereon are based upon plat meridian for Village of Hickory Ridge, Section 3 Area 4 Parcels K, I and M as recorded on Plat 5673 and 5674.
- The contractor shall notify the Department of Public Works/Bureau of Construction Inspection at (410) 313-1870 at least (5) working days prior to the start of work. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- Utilities shown as existing are taken from approved water and sewer plan, Contract #34-3269-D, approved road construction plans F-93-110.
- Storm water management is provided off site in a regional storm water management facility as shown on F-83-120, Extended Detention Facility.
- WP-93-58 approved 1-27-93 to waive section 16.128.2 waiving the requirement of sidewalk on both sides of all streets in a S.F.A. project and 16.115 (b)(5) to permit private drives to exceed 200 feet in length.
- No clearing, grading or construction is permitted within wetlands and stream buffers.
- Vehicular ingress & egress into public right of way restricted except at locations approved by Howard County Dept. of Planning & Zoning.
- Public water and sewer is to be utilized.
- Any damage to county owned right of way to be corrected at the developers expense.
- The area included in this submission is located on Tax Map No. 35, Parcel 394.
- All materials and construction is to be in accordance with the Howard County road construction codes and specifications.
- The minimum building setback restrictions from the property lines and the right of ways of any public road to be in accordance with the Final Development Plan, Phase 181-A-III, Part II recorded 3-8-93.
- Wetland evaluation prepared by Geotechnology Associates, Inc. on May 5, 1992.
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location of utilities by digging test pits, by hand at all crossings prior to construction.
- The Contractor or developer agrees to work with the Department of Inspections, Licenses & Permits to resolve any problem with roof water discharge.
- Installation of traffic control devices shall be in accordance with the latest edition of the "Manual of Uniform Traffic Control".
- Bench marks taken from a topographic survey prepared by Fisher Collins and Carter, Inc. F-93-67.
- Traffic study was prepared by the Traffic Group Inc., on Jan. 27, 1993.
- Environmental analysis was submitted with previously approved Preliminary Plan Equivalent Sketch Plan SP-93-12.
- Limit of Submission includes lots M-60 thru M-103.
- Garages cannot be made into living space because the minimum required includes garage parking.
- For Driveway Entrance Details, refer to Howard County Design Manual Volume II Standard Detail R-G.03.

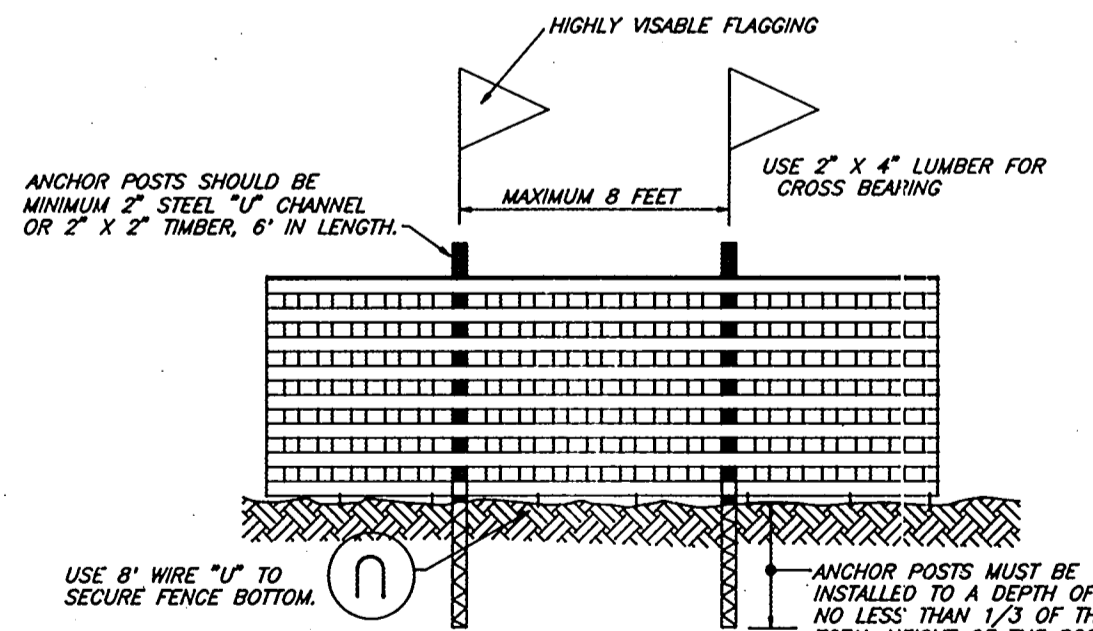
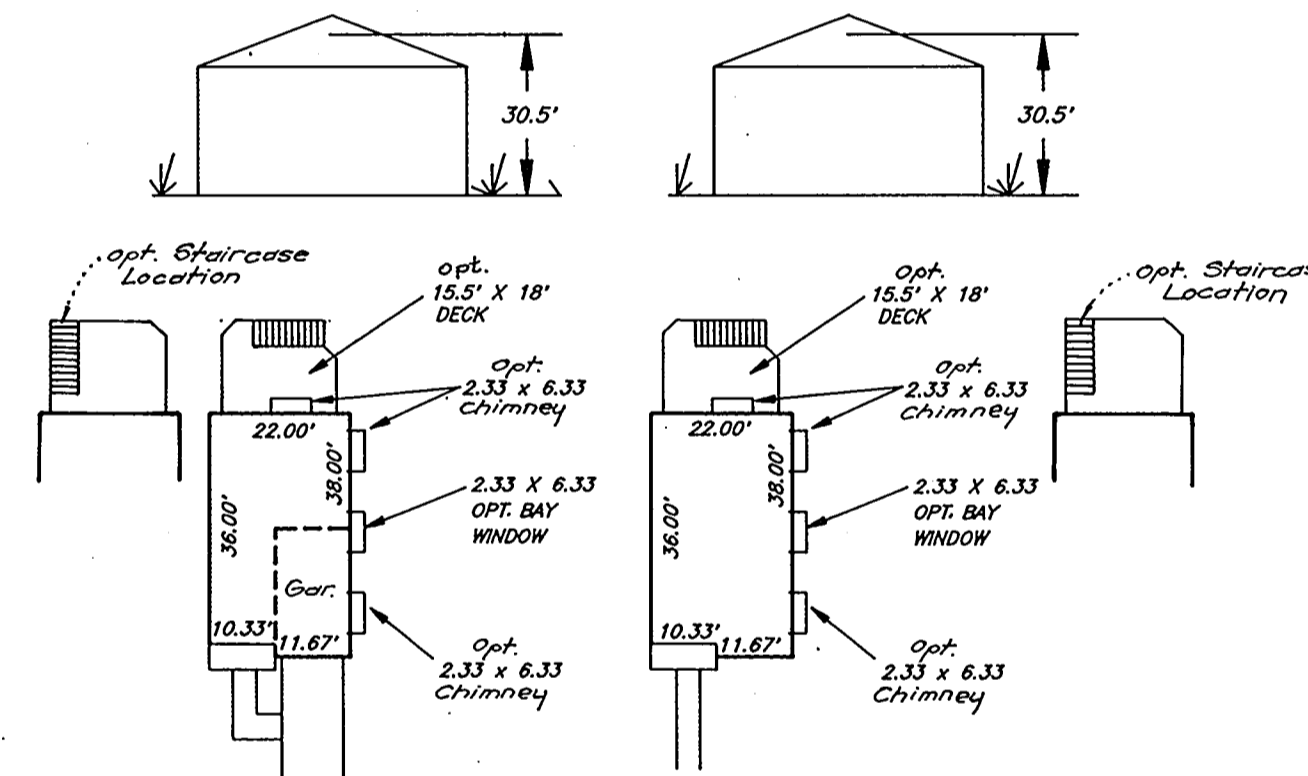
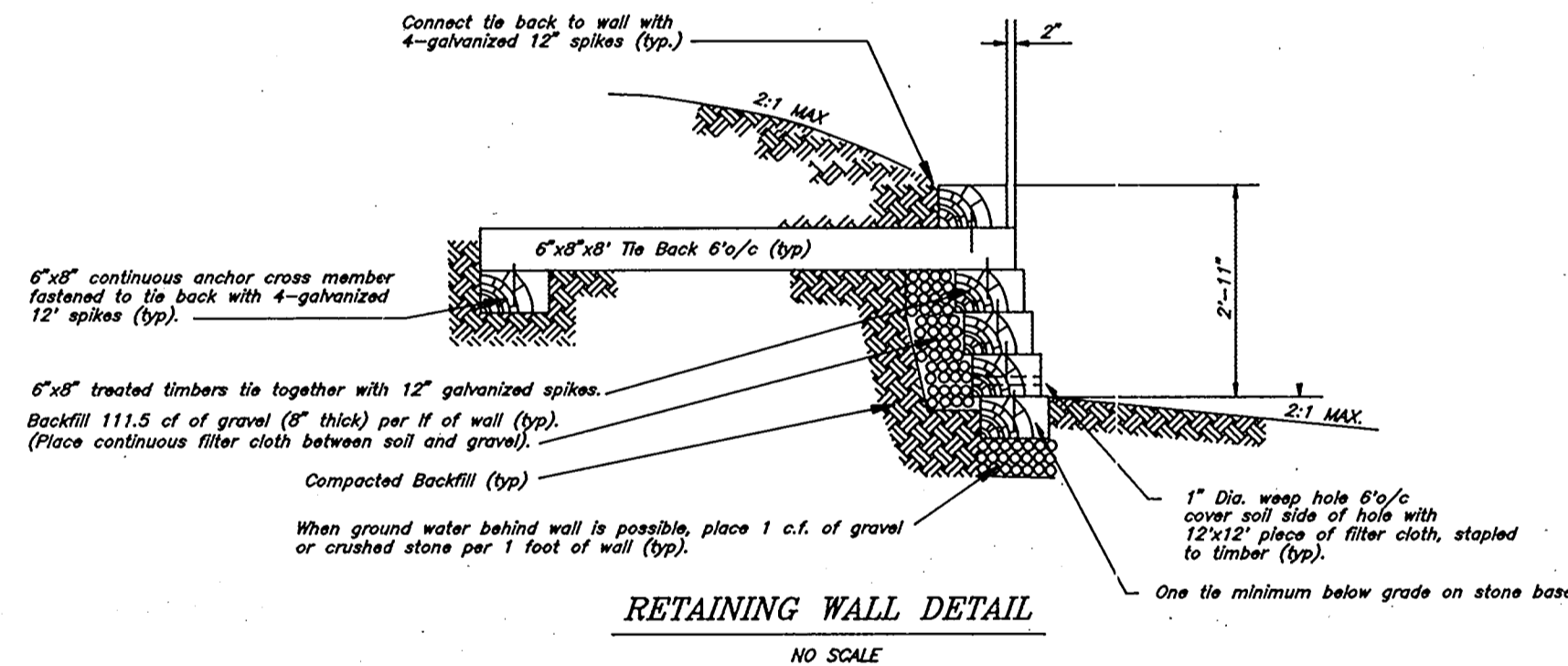
**STREET ADDRESS CHART**

Lot No.	STREET ADDRESS
M-60	12201 BARE BUSH PATH
M-61	12203 BARE BUSH PATH
M-62	12205 BARE BUSH PATH
M-63	12207 BARE BUSH PATH
M-64	12209 BARE BUSH PATH
M-65	12211 BARE BUSH PATH
M-66	12213 BARE BUSH PATH
M-67	12215 BARE BUSH PATH
M-68	12217 BARE BUSH PATH
M-69	12219 BARE BUSH PATH
M-70	12221 BARE BUSH PATH
M-71	12223 BARE BUSH PATH
M-72	12225 BARE BUSH PATH
M-73	12227 BARE BUSH PATH
M-74	12229 BARE BUSH PATH
M-75	12231 BARE BUSH PATH
M-76	12233 BARE BUSH PATH
M-77	12235 BARE BUSH PATH
M-78	12237 BARE BUSH PATH
M-79	12239 BARE BUSH PATH
M-80	12241 BARE BUSH PATH
M-81	12243 BARE BUSH PATH
M-82	12245 BARE BUSH PATH
M-83	12247 BARE BUSH PATH
M-84	12249 BARE BUSH PATH
M-85	12251 BARE BUSH PATH
M-86	12253 BARE BUSH PATH
M-87	12255 BARE BUSH PATH
M-88	12257 BARE BUSH PATH
M-89	12259 BARE BUSH PATH
M-90	12261 BARE BUSH PATH
M-91	12263 BARE BUSH PATH
M-92	12242 BARE BUSH PATH
M-93	12240 BARE BUSH PATH
M-94	12238 BARE BUSH PATH
M-95	12236 BARE BUSH PATH
M-96	12234 BARE BUSH PATH
M-97	12232 BARE BUSH PATH
M-98	12230 BARE BUSH PATH
M-99	12208 BARE BUSH PATH
M-100	12206 BARE BUSH PATH
M-101	12204 BARE BUSH PATH
M-102	12202 BARE BUSH PATH
M-103	12200 BARE BUSH PATH

**SEWER HOUSE CONNECTION TABLE**

Lot No.	Inv. @ PL	Min. CEL
M-60	407.0	410.1
M-61	407.1	410.3
M-62	407.3	410.5
M-63	407.6	410.8
M-64	407.5	410.7
M-65	408.0	411.2
M-66	407.8	411.0
M-67	408.1	411.3
M-68	409.7	412.7
M-69	409.6	412.6
M-70	408.0	411.1
M-71	407.7	410.8
M-72	406.3	409.5
M-73	406.1	409.3
M-74	404.9	407.7
M-75	403.4	406.6
M-76	402.8	406.0
M-77	401.9	405.1
M-78	401.2	404.3
M-79	400.1	403.2
M-80	399.0	402.2
M-81	398.3	401.5
M-82	397.8	401.0
M-83	398.0	401.0
M-84	390.9	393.9
M-85	396.9	400.2
M-86	396.6	399.8
M-87	396.0	399.2
M-88	395.7	398.9
M-89	395.2	398.4
M-90	394.8	397.9
M-91	394.3	397.4
M-92 D.H.C.	399.9	402.9
M-93 D.H.C.	401.1	404.2
M-94 D.H.C.	401.3	404.4
M-95 D.H.C.	402.2	405.4
M-96	403.3	406.6
M-97	404.0	407.3
M-98	404.2	407.4
M-99	408.3	411.9
M-100	407.6	411.2
M-101	406.5	410.0
M-102	404.8	408.2
M-103	403.9	407.1

- NOTE:**
- Timbers shall be either: a) CCA treated railroad ties, b) CCA treated landscaping timbers (40 lb./cf retention)
  - Hardware shall be hot dipped galvanized.
  - Washholes with or without gravel drains are minimum measures for groundwater, a drain system should be designed and utilized.
  - Design shall be verified for site specific soil condition by a Professional Geotechnical Engineer.



- NOTES:**
- Forest protection device only.
  - Retention area will be set as part of the review process.
  - Boundaries of retention area should be staked and flagged prior to installing device.
  - Root damage should be avoided.
  - Protection signage may also be used.
  - Device should be maintained throughout construction.

**OWNER / DEVELOPER:**  
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MD 21044

**SHEET INDEX**

DESCRIPTION	SHEET NO.
SITE DEVELOPMENT COVER SHEET	1
SITE DEVELOPMENT PLAN	2
SEDIMENT AND EROSION AND CONTROL PLAN	3
SEDIMENT AND EROSION DETAILS SHEET	4
LANDSCAPE PLAN	5

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS
COLUMBIA VILLAGE OF HICKORY RIDGE	3/4	M-60 THRU M-104
PLAT NO.	BLOCK NO.	ZONE
1095310954	4	N.T.
TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
35	5TH	6056
WATER CODE	SEWER CODE	
I-15	6593000	

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

*Jesse M. Boyd* 10-4-93  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*James J. Sullivan* 10/13/93  
DIRECTOR DATE  
*Gina J. Jaraman* 10/13/93  
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

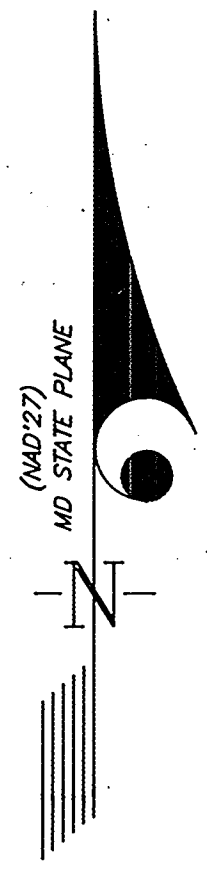
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*James M. J. Jaraman* 9/28/93  
DIRECTOR DATE  
*Charles E. Jaraman* 9/28/93  
CHIEF BUREAU OF ENGINEERING DATE

**APPROVED**  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE 9 Sept. 1993

**CLARK • FINEFROCK & SACKETT, INC.**  
ENGINEERS • PLANNERS • SURVEYORS  
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 • BALTO. • (301) 621-8100 • WASH.

DESIGNED MJP	<b>SITE DEVELOPMENT PLAN</b> LOTS M-60 THRU M-104 <b>COLUMBIA</b> A RESUBDIVISION OF PARCEL M-59 VILLAGE OF HICKORY RIDGE SECTION 3 AREA 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: COLUMBIA BUILDERS INC. P.O. BOX 999 COLUMBIA, MD 21044	SCALE As Shown
DRAWN KIWM LAI		DRAWING 1 OF 5
CHECKED MJP		JOB NO. 92-166
DATE 6-93		FILE NO. 92-166-X
		SDP 93-130



PARCEL 'L'  
 PLAT 5673  
 COLUMBIA  
 VILLAGE OF HICKORY RIDGE  
 SECTION 3 AREA 4  
 ZONED NEW TOWN

OPEN SPACE  
 LOT 3  
 PLAT 10747  
 COLUMBIA  
 VILLAGE OF HICKORY RIDGE  
 SECTION 3 AREA 4  
 ZONED NEW TOWN

**APPROVED**  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE 10 Sept. 1993

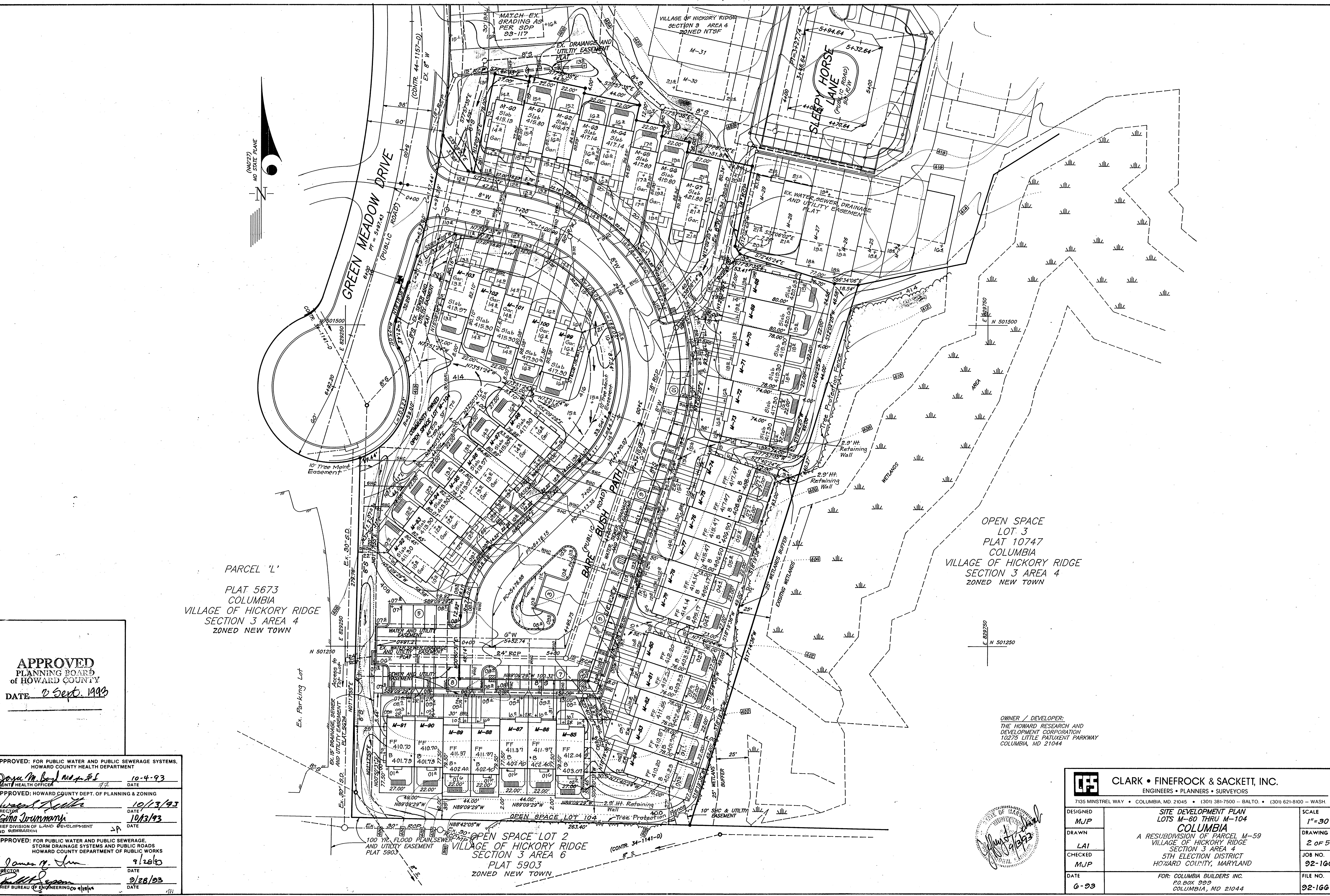
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
 HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER James M. Boyd DATE 10-4-93

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 DIRECTOR Wesley DeWitt DATE 10/13/93  
 CHIEF DIVISION OF LAND DEVELOPMENT  
 AND RESEARCH  
 DIRECTOR Gina Scummons DATE 10/13/93

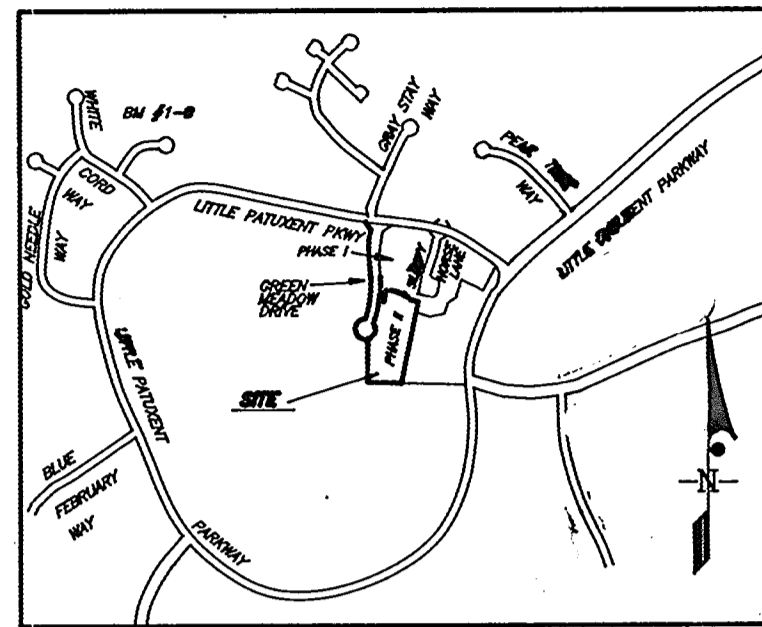
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR James R. Lee DATE 9/28/93  
 CHIEF BUREAU OF ENGINEERING William E. ... DATE 9/28/93

OWNER / DEVELOPER:  
 THE HOWARD RESEARCH AND  
 DEVELOPMENT CORPORATION  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MD 21044

<b>CLARK • FINEFROCK &amp; SACKETT, INC.</b> ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 381-7500 - BALTO. • (301) 621-8100 - WASH.			
DESIGNED	MJP	SITE DEVELOPMENT PLAN LOTS M-60 THRU M-104 <b>COLUMBIA</b> A RESUBDIVISION OF PARCEL M-59 VILLAGE OF HICKORY RIDGE SECTION 3 AREA 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE <b>1"=30'</b>
DRAWN	LAI		DRAWING <b>2 OF 5</b>
CHECKED	MJP		JOB NO. <b>92-166</b>
DATE	6-93	FOR: COLUMBIA BUILDERS INC. P.O. BOX 999 COLUMBIA, MD 21044	FILE NO. <b>92-166-X</b>



OPEN SPACE LOT 2  
 VILLAGE OF HICKORY RIDGE  
 SECTION 3 AREA 6  
 PLAT 5903  
 ZONED NEW TOWN



VICINITY MAP  
SCALE 1" = 1200'

**LEGEND**

- CONTOUR INTERVAL 2 FT.
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- WALK OUT BASEMENT
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- EXISTING TREES TO REMAIN
- ELECTRIC CONDUIT
- TELEPHONE CONDUIT
- EARTH DIKE
- SILT FENCE
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBED AREA
- EXISTING EARTH DIKE
- Tree Protection Fence

EXISTING EARTH DIKE TO REMAIN AND BE UTILIZED

PARCEL 'L'  
PLAT 5673  
COLUMBIA  
VILLAGE OF HICKORY RIDGE  
SECTION 3 AREA 4  
ZONED NEW TOWN

Ex. TRAP #1 to be Utilized  
See F-93-117

D.A. = 3.1 Ac.  
Storage Required = 5580 of  
Storage Provided = 5796 of  
Depth = 4.5'  
Top of Stone Weir = 403.50  
Bottom EL = 398.0  
Cleanout EL = 400.25  
Bottom Dimensions = 56' x 17'  
2:1 Side Slopes  
Riser Crest = 402.00

**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE 10 Sept. 1993

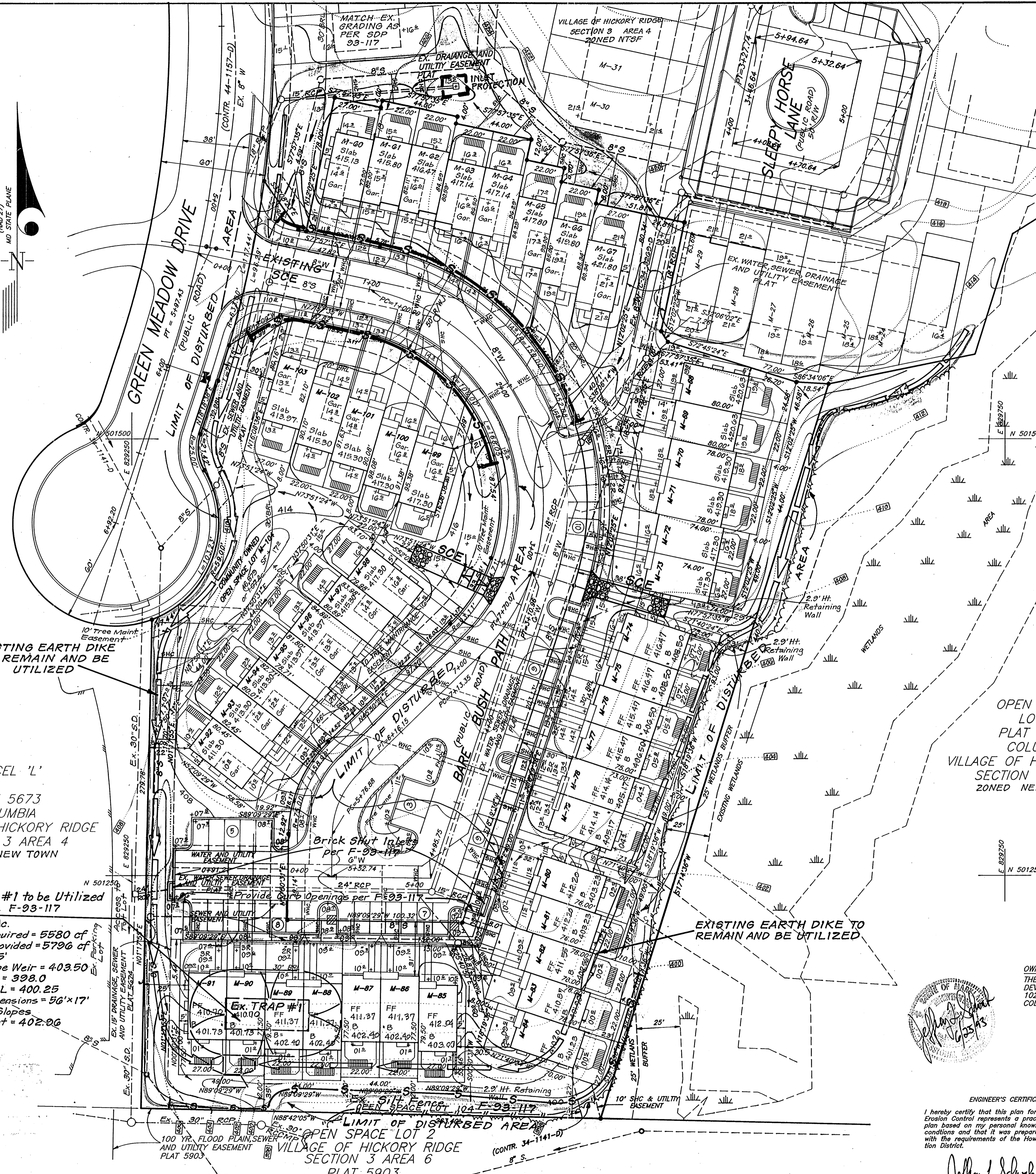
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT  
*Joyce M. Bond* 10-4-93  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*James S. Smith* 10/13/93  
DIRECTOR DATE

CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH  
*Gina Jurnovany* 10/13/93  
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS,  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*James G. Lee* 9/28/93  
DIRECTOR DATE

*Donald J. Johnson* 9/28/93  
CHIEF BUREAU OF ENGINEERING DATE



NOTE: EXISTING SEDIMENT AND EROSION CONTROL MEASURES SHOWN, TAKEN FROM F-93-117.

OPEN SPACE  
LOT 3  
PLAT 10747  
COLUMBIA  
VILLAGE OF HICKORY RIDGE  
SECTION 3 AREA 4  
ZONED NEW TOWN

Reviewed for HOWARD S.C.D.  
Name  
*Donald J. Johnson* 9/28/93  
Signature Date  
US Soil Conservation Service

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

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 sediment and erosion control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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 of their authorized agents, as are deemed necessary."  
*John G. Field* 6/26/93  
Signature Date

OWNER / DEVELOPER:  
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MD 21044



ENGINEER'S CERTIFICATE  
I hereby certify that this plan for Sediment and Erosion 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.  
*Jeffrey S. Schmitt* 6/25/93  
Signature Date

<b>CLARK • FINEFROCK &amp; SACKETT, INC.</b> ENGINEERS • PLANNERS • SURVEYORS		7135 MINSTREL WAY • COLUMBIA, MD 21045 • (301) 981-7500 BALTO. • (301) 621-8100 - WASH
DESIGNED KIWM	SEDIMENT AND EROSION CONTROL PLAN LOTS M-60 THRU M-104	
DRAWN LAI	COLUMBIA A RESUBDIVISION OF PARCEL M-59 VILLAGE OF HICKORY RIDGE SECTION 3 AREA 4	
CHECKED JLS KIWM	5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
DATE 6-93	FOR: COLUMBIA BUILDERS INC. P.O. BOX 393 COLUMBIA, MD 21044	
SCALE 1" = 30'	DRAWING 3 OF 5	FILE NO. 92-1665E

EXP 93-130

**SEDIMENT AND EROSION CONTROL NOTES**

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection & Permits prior to the start of any construction. (313-18)(10).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1983 MARYLAND STANDARDS AND SPECS. 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 perimeters 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) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates 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: 2.99 Ac  
 Area Disturbed: 2.47 Ac  
 Area to be roofed or paved: 0.88 Ac  
 Area to be vegetatively stabilized: 1.59 Ac  
 Total Fill: \_\_\_\_\_  
 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 control must be provided, if deemed necessary by the Howard County DPW 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.
- If houses are to be constructed on an "as sold" basis, at random, Single Family Sediment Control, as shown below shall be implemented.
- The total amount of silt fence= 645 LF

\* it is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

**PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

**SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

**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 sq 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 the 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 60 lbs per acre (14 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 (0.5 lbs./1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

**MULCHING:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq ft) of unrattled 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**

**SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

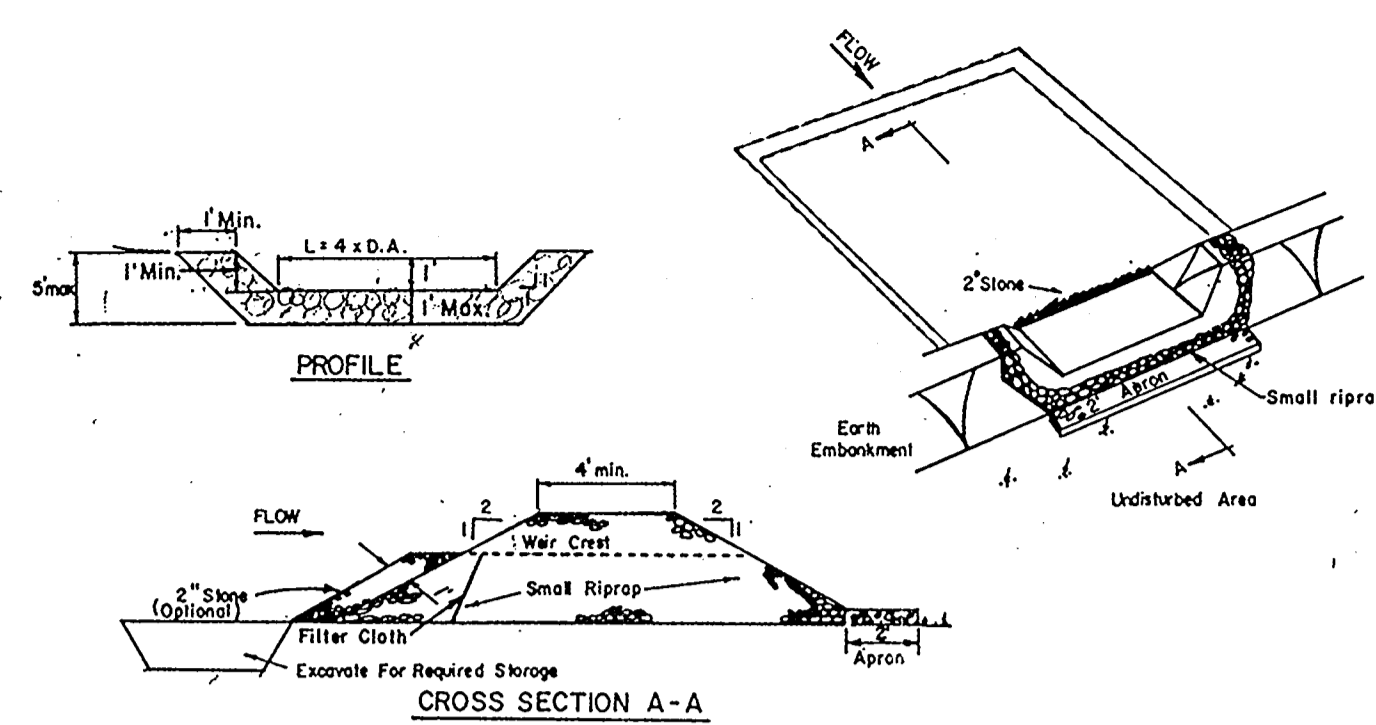
**SOIL AMENDMENTS:** Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs./1000 sq ft).

**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 ryegrass (3.2 lbs./1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (0.8 lbs./1000 sq ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

**MULCHING:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq ft) of unrattled 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.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

**STONE OUTLET SEDIMENT TRAP V**

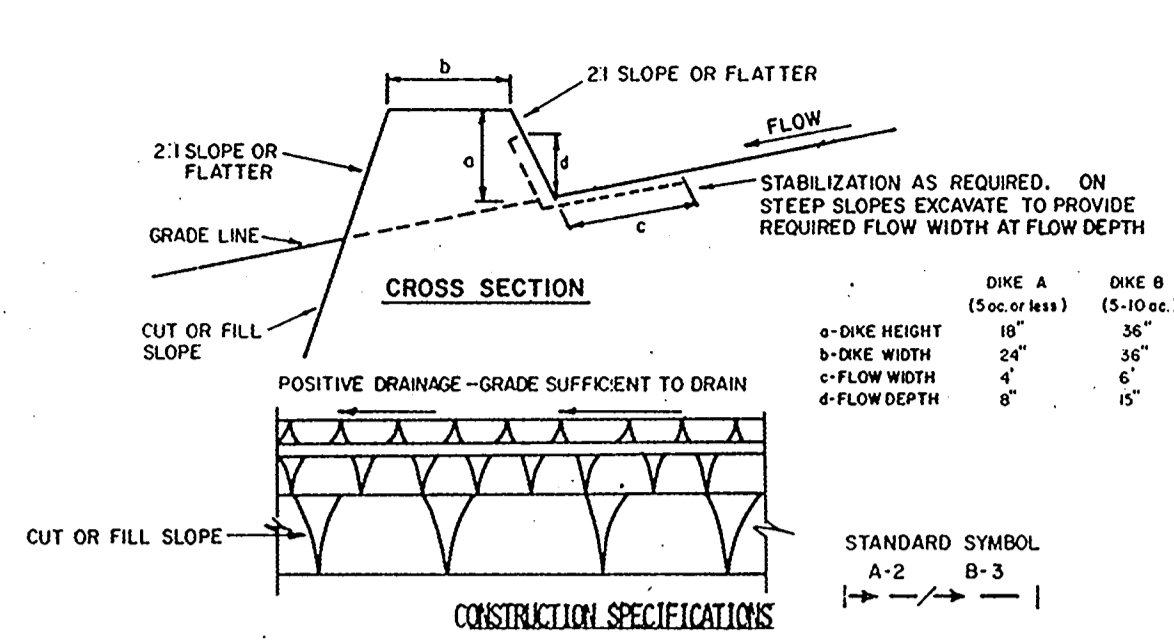


OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

**CONSTRUCTION SPECIFICATIONS FOR ST-V**

- 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 and other woody vegetation as well as oversized stones, rocks, organic material or objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- All cut and fill slopes shall be 2:1 or flatter.
- The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap on embedded filter cloth in the riprap.
- 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.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

**EARTH DIKE**  
not to scale



- All dikes shall be compacted by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- 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 THE CHART BELOW.

TYPE OF TREATMENT	FLOW CHANNEL STABILIZATION	
	CHANNEL DIKE A	DIKE B
1	5-5.0%	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE
4	8.1-20%	LINED RIP-RAP 4-8" ENGINEERING DESIGN

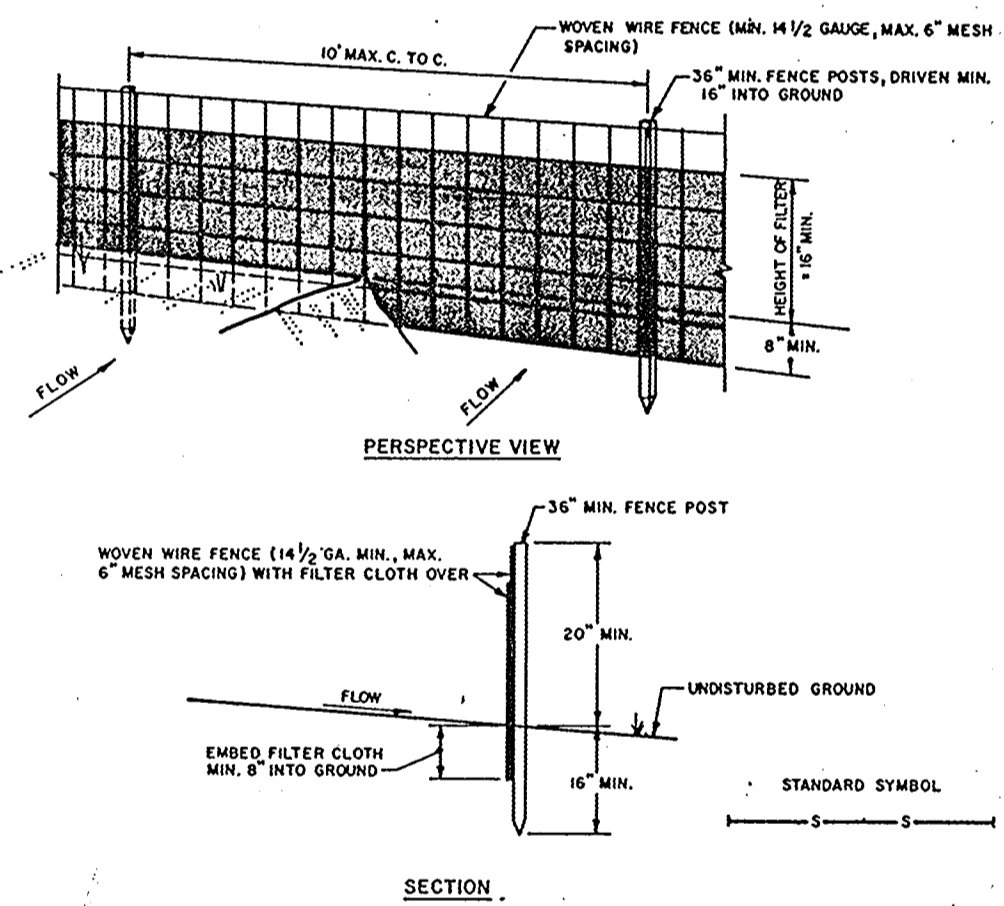
A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.  
 B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.  
 C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.  
 7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
COLLEGE PARK, MARYLAND

EARTH DIKE

STANDARD DRAWING  
ED-1

**SILT FENCE**



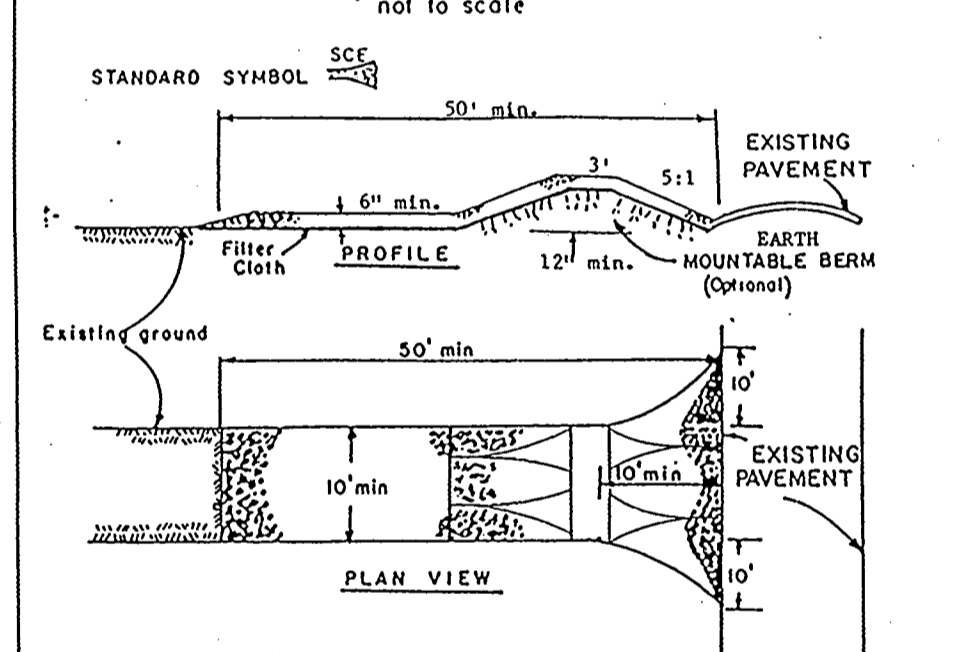
- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
  - Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
  - When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD  
 FENCE: WOVEN WIRE, 1 1/2 GA., 6" MAX. MESH OPENING  
 FILTER CLOTH: FILTER V, MINRAFI 100, STABILINA 120N OR APPROVED EQUAL.  
 PREFABRICATED UNIT: GEOTEX, ENVIRFENCE, OR APPROVED EQUAL.

U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
COLLEGE PARK, MARYLAND

SILT FENCE

STANDARD DRAWING  
SF-1

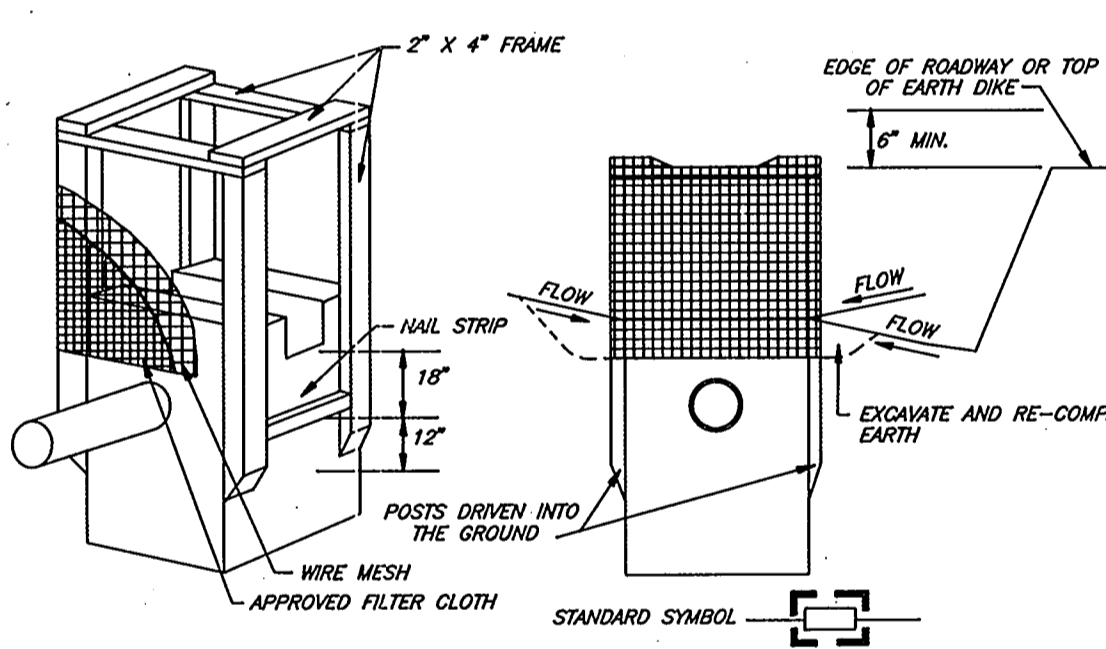
**STABILIZED CONSTRUCTION ENTRANCE**  
not to scale



- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
  - Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
  - Thickness - Not less than six (6) inches.
  - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
  - Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
  - Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
  - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
  - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
  - Periodic inspection and needed maintenance shall be provided after each rain.

SOIL CONSERVATION SERVICE  
STABILIZED CONSTRUCTION ENTRANCE  
Standard Drawing  
SCT-2

**SWALE INLET PROTECTION DETAIL**



- MATERIALS:**
- Wooden frame is to be constructed of 2" x 4" construction grade lumber.
  - Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
  - Filter cloth must be of a type approved for this purpose, resistant to sunlight with stone size, 40-60, to allow sufficient passage of water and removal of sediment.
  - Stone is to be 2" in size and clean, since fines would clog the cloth.
- PROCEDURE:**
- Excavate completely around the inlet to a depth of 18" below notch elevation.
  - Drive 2" x 4" post 1' into ground at four corners of inlet. Place nail strips between posts on end of inlet. Assemble top portion of 2 x 4 frame using overlap joint shown. Top of frame (wire) must be 6" below edge of roadway adjacent to inlet.
  - Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
  - Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elevation. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down. Secure around inlet in compacted 6" layers until layer of earth is even with the notch elevation on ends and top elevation on sides.
  - If inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (wire).
  - This structure must be inspected frequently and the filter fabric replaced when clogged.

Reviewed for HOWARD S.C.D. Name and meets Technical Requirements  
 Signature Date  
 US Soil Conservation Service

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 sediment and erosion control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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.  
 Signature Date 6/25/93



ENGINEER'S CERTIFICATE  
 I hereby certify that this plan for Sediment and Erosion 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 Date 6/25/93

OWNER / DEVELOPER:  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MD 21044

**CONSTRUCTION SEQUENCE:**

	NO. OF DAYS
A. Obtain grading permit	7
B. Install tree protection fence	7
C. Install sediment and erosion control devices and stabilize	14
D. Excavate for foundations, rough grade and temporarily stabilize	30
E. Construct structures, sidewalks and driveways	60
F. Final grade and stabilize in accordance with Stds. and Specs.	14
G. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

# Delay construction of houses on lots M-80 thru M-91 until permission to remove Ex. Trap #1 has been obtained.  
 NOTE: Silt Fence will be provided as directed by the sediment control inspector to complete the construction of units M-80 thru M-91.

**CLARK • FINEFROCK & SACKETT, INC.**  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7500 - BALTO. • (301) 621-8100 - WASH.

DESIGNED KIWM	<b>SEDIMENT AND EROSION CONTROL PLAN</b> LOTS M-80 THRU M-104 COLUMBIA A RESUBDIVISION OF PARCEL M-59 VILLAGE OF HICKORY RIDGE SECTION 3 AREA 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: COLUMBIA BUILDERS, INC. P.O. BOX 999 COLUMBIA, MD 21044	SCALE As Shown
DRAWN LAI		DRAWING 4 OF 5
CHECKED VLS KIWM		JOB NO. 92-166
DATE 6-93		FILE NO. 92-166SE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS,  
 HOWARD COUNTY HEALTH DEPARTMENT  
 County Health Officer DATE 10-4-93

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Director DATE 10/3/93

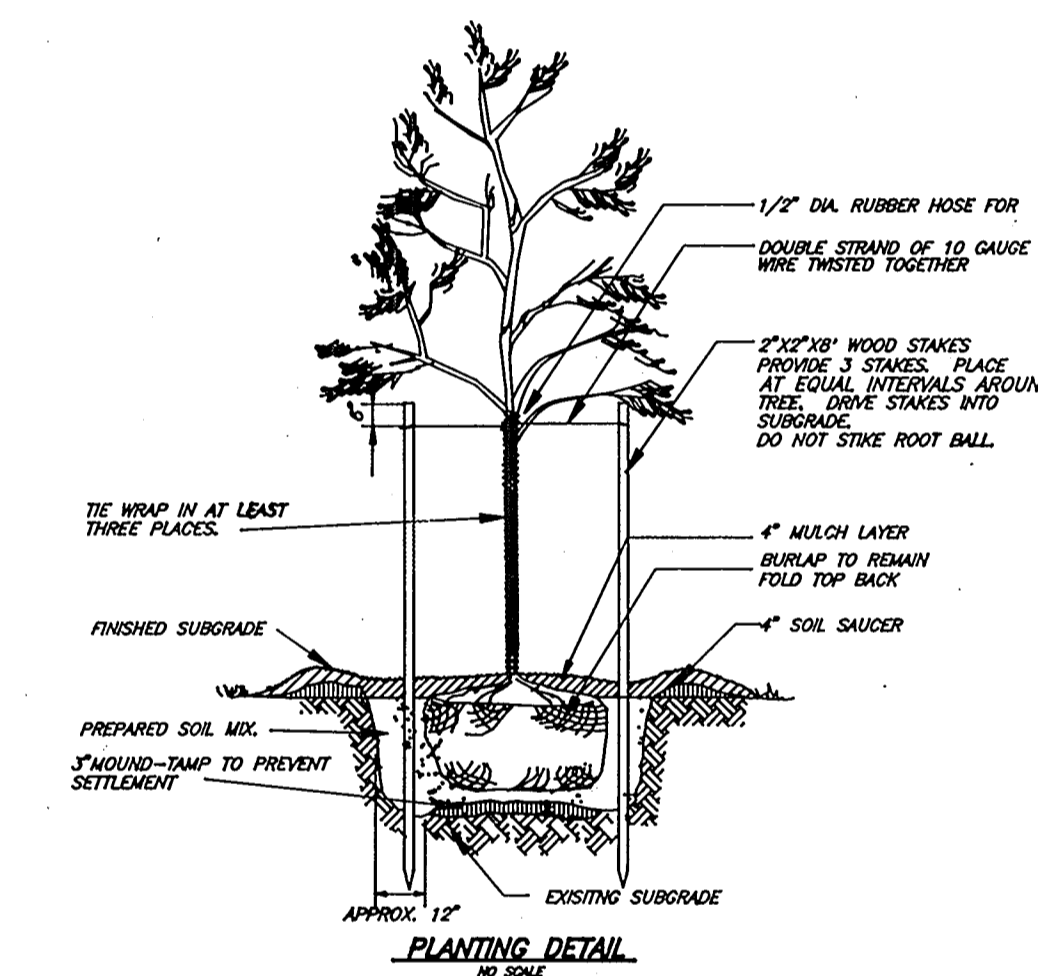
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Director DATE 9/28/93

APPROVED  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE 2 Sept. 1993

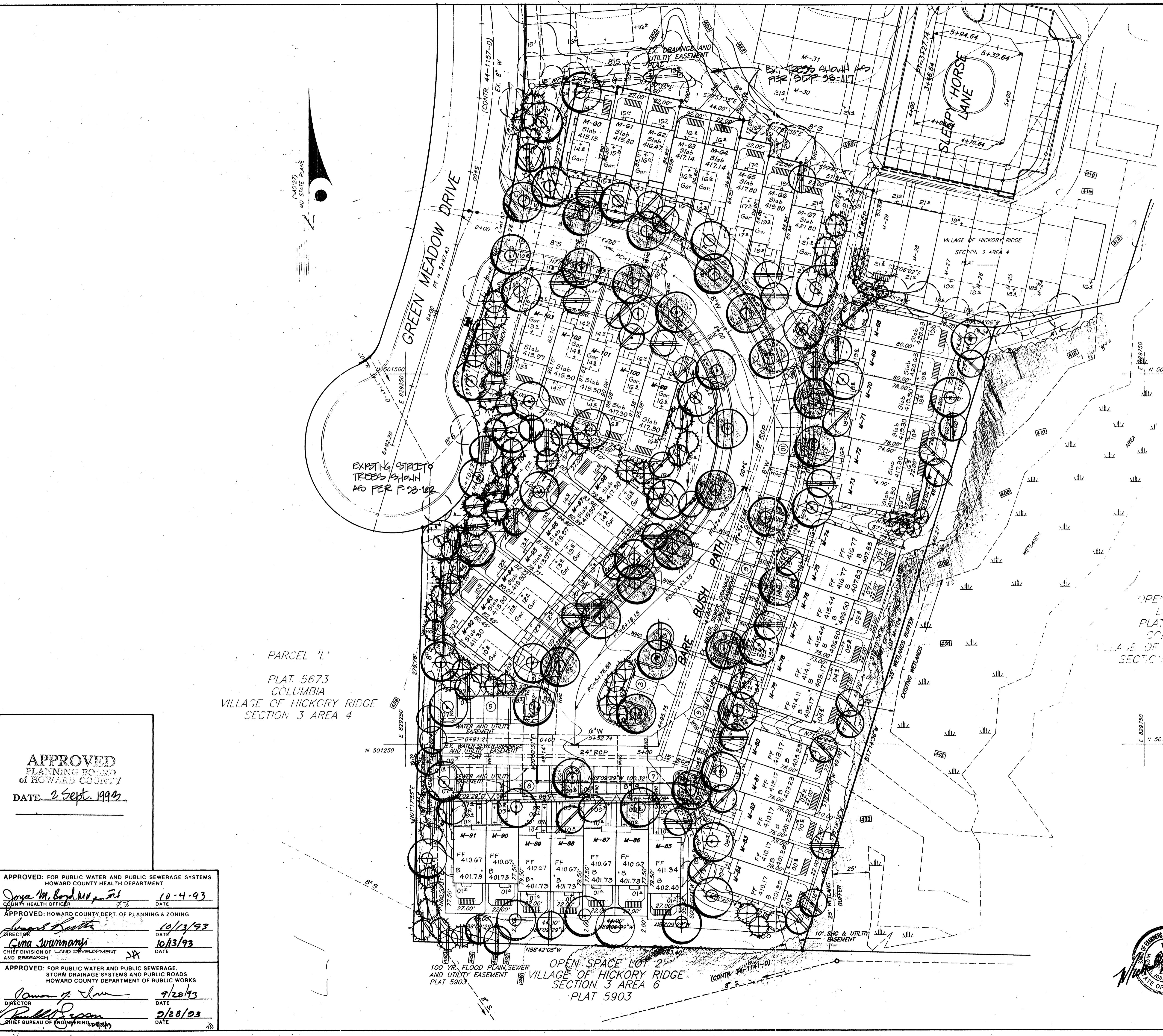
PLANT SCHEDULE

KEY	PLANT NAME	SIZE	QNTY	REMARKS
SHADE TREES				
⊙	Acer rubrum "Red Sunset"	2-1/2" X 3" cal.	9	B & B Heavy Heads
⊙	Red Sunset Maple	12-14' Ht.		
⊙	Quercus Rubra	2-1/2" X 3" cal.	15	B & B Heavy Heads
⊙	Red Oak	12-14' Ht.		
⊙	Zelkova serrata "Green Vase"	2-1/2" X 3" cal.	15	B & B Heavy Heads
⊙	Green Vase Zelkova	12-14' Ht.		
FLOWERING/EVERGREEN TREES				
⊙	Cornus florida rubra	2"- 2 1/2" cal.	8	B & B Heavy Heads
⊙	Pink Flowering Dogwood	8'-10' Ht.		
⊙	Cornus kousa	2"- 2 1/2" cal.	14	B & B Heavy Heads
⊙	Kousa Dogwood	8'-10' Ht.		
⊙	Magnolia soulangeana	2"- 2 1/2" cal.	16	B & B Heavy Heads
⊙	Saucer Magnolia	8'-10' Ht.		
⊙	Prunus serrulata "Kwanzan"	2"- 2 1/2" cal.	19	B & B Heavy Heads
⊙	Kwanzan Cherry	8'-10' Ht.		
⊙	Cupressocyparis Leylandii	6' Ht.	11	B & B Heavy Heads
⊙	Leyland Cypress			
⊙	Pinus strobus	6'-8' Ht.	22	B & B Heavy Heads
⊙	Eastern White Pine			
⊙	Picea abies	6'-8' Ht.	30	B & B Heavy Heads
⊙	Norway Spruce			
⊙	Pinus thunbergii	8'-10' Ht.	11	B & B Heavy Heads
⊙	Japanese Black Pine			

- NOTES
- All planting shall be done in accordance with Columbia, H.R.D. planting specifications.
  - Contractor shall verify location of all underground utilities prior to digging.
  - Final location of plant material may vary per final field conditions.
  - Shaded street trees were taken from F-93-122 and are existing. The quantity and type remain the same, however, the locations have been revised to accommodate driveways.
  - This plan has been prepared in accordance with the New Town Alternative Compliance provisions of section 16-124 of the Ho. Co. Code and Landscape Manual.



OPEN SPACE LOT 3  
 PLAT 10747  
 COLUMBIA  
 VILLAGE OF HICKORY RIDGE  
 SECTION 3 AREA 4



APPROVED  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE: 2 Sept. 1993

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 Joyce M. Boyd, M.P.H. 10-4-93  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 David Smith 10/13/93  
 DIR. DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 James J. Shaw 9/28/93  
 DIRECTOR DATE

APPROVED: CHIEF BUREAU OF ENGINEERING  
 Joseph J. ... 2/28/93  
 CHIEF BUREAU OF ENGINEERING DATE

SPECIAL NOTE  
 Financial surety for 66 trees in the amount of \$6,000.00 is part of the grading permit application.

CLARK • FINEFROCK & SACKETT, INC.  
 ENGINEERS • PLANNERS • SURVEYORS  
 7135 MINSTREL WAY • COLUMBIA MD 21045 • (301) 981-7500 BALTO • (301) 621-8100 - WASH

DESIGNED MJP	LANDSCAPE PLAN LOTS M-60 THRU M-104 COLUMBIA A RESUBDIVISION OF PARCEL M-59 VILLAGE OF HICKORY RIDGE SECTION 3 AREA 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: COLUMBIA BUILDERS INC. P.O. BOX 909 COLUMBIA, MD 21044	SCALE 1"=30'
DRAWN LAI		DRAWING 5 of 5
CHECKED MJP		JOB NO. 92-166
DATE 6-93		FILE NO. 92-166-15

