

SECTION, # AREA # ZONED: NISELD 59 COLUMBIA
VILLAGE OF RIVER HILL
SECTION 4 AREA 4
ZONED: NYSFLD B=449.14 B=440.47 3' Public Water, Sewer, 4 Utility Easement— COLUMBIA
VILLAGE OF RIVER HILL
SECTION 4 AREA 4
ZONED: NISFLD FLOWING WATER TRAIL A FF=446.60 B=437.93 FF=448.34 8=439.67 Prop. Hse. SDP-00-102 COLUMBIA
VILLAGE OF RIVER HILL
SECTION 4 AREA 4
ZONED: NISFLD

LEGEND

CONTOUR INTERVAL 2 FT.

EXISTING CONTOUR — 346 —

OWNER / DEVELOPER

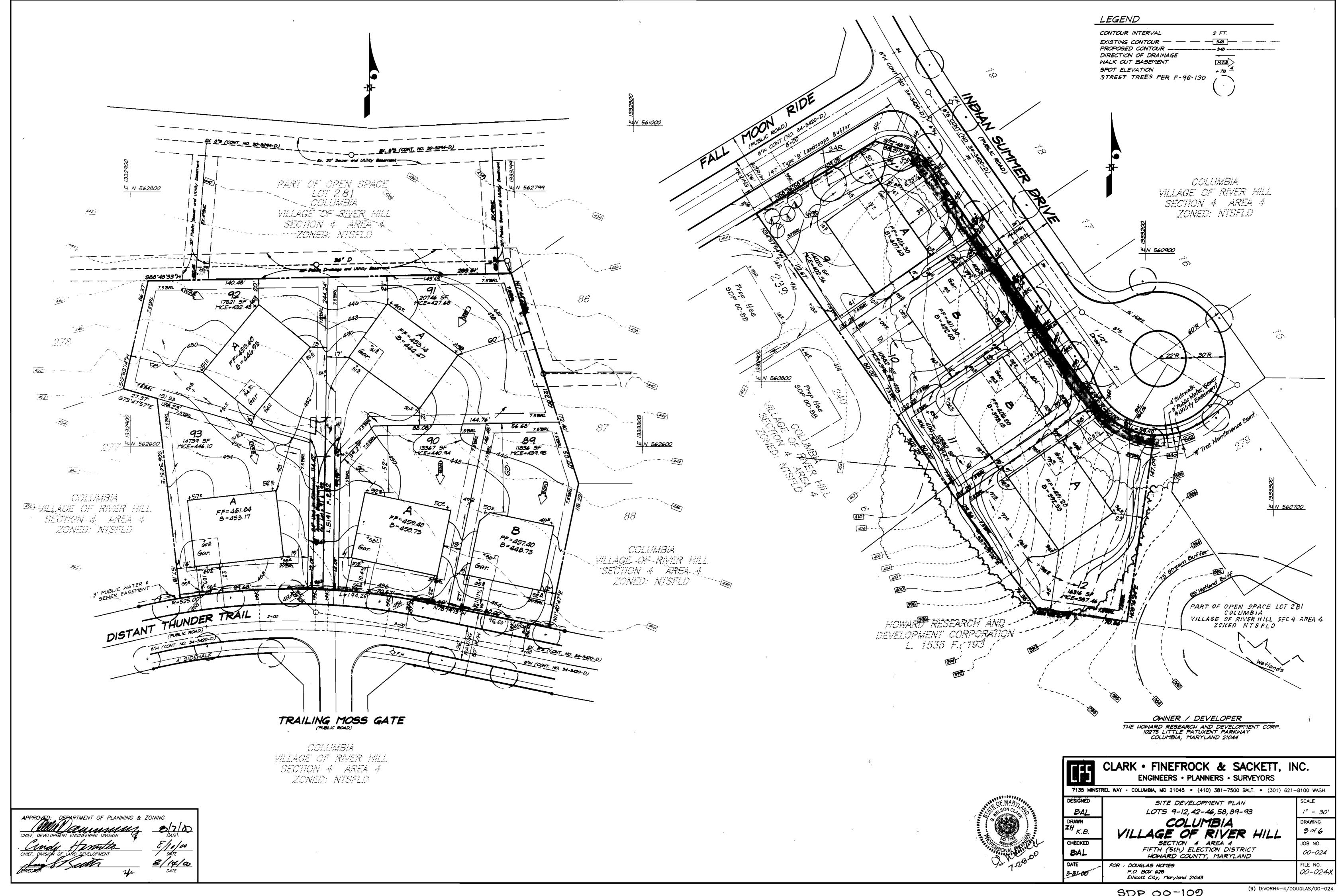
THE HOWARD RESEARCH AND DEVELOPMENT CORP.

10275 LITTLE PATUXENT PARKWAY

COLUMBIA, MARYLAND 21044



CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.				
DESIGNED BAL	SITE DEVELOPMENT PLAN LOTS 9-12,42-46,58,89-93	SCALE /" = 30'		
DRAWN ZH K.B.	COLUMBIA VILLAGE OF RIVER HILL	DRAWING 2 of 6		
CHECKED BAL	SECTION 4 AREA 4 FIFTH (5th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO 00-024		
3-31-00	FOR : DOUGLAS HOMES P.O. BOX 628 Ellicott City, Maryland 21043	FILE NO. 00-024X		



LEGEND COLUMBIA FF=449/4 3=440/4 SECTION # AREA # ZONED: WISFLD 3' Public Water, Sewer, # Utility Easement -FLOATING CLOUDS PATH COLUMBIA VILLAGE OF RIVER HILL FLOWING WATER TRAIL SECTION 4 AREA 4 ZONED: NYSFLD 8"W (CONT. NO. 34-3420-D)______ FF=448.34 B=439.67 FF=446.60 B=437.93 Prop. Hse. SDP-00-102 *COLUMBI*A VILLAGE OF RIVER HILL SECTION 4 AREA 4 ZONED: NVSFLD

CONTOUR INTERVAL

EXISTING CONTOUR — 348

PROPOSED CONTOUR — 348

DIRECTION OF DRAINAGE

WALK OUT BASEMENT

SPOT ELEVATION

EROSION CONTROL MATTING

SILT FENCE — SF — SF — STABILIZED CONSTRUCTION ENTRANCE

LIMIT OF DISTURBANCE — SDF —

OWNER / DEVELOPER

THE HOWARD RESEARCH AND DEVELOPMENT CORP.

10275 LITTLE PATUXENT PARKWAY

COLUMBIA, MARYLAND 21044

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE

8/4/2

Reviewed for HOWARD S.C.D.

Ind meet Scholal Requirements

Signature Date

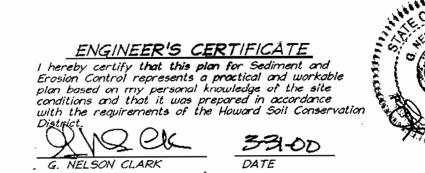
U.S. Natural Resource Plan IS APPROVED
FOR SOIL EROSION AND SEDIMENT
CONTROL BY THE HOWARD SOIL
CONSERVATION DISTRICT.

Approved

"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 on their authorized agents, as are deemed necessary."

NAME

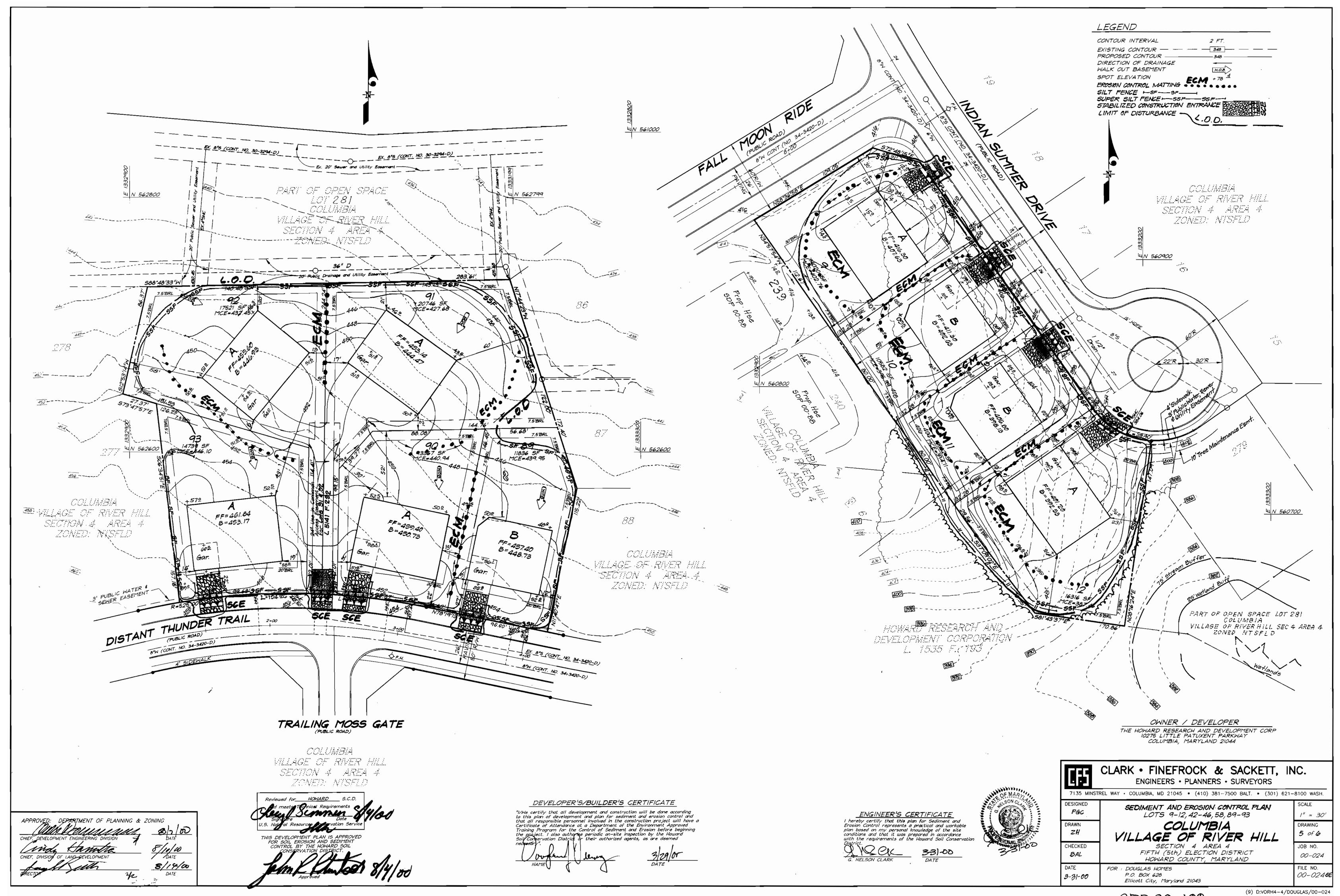
NAME

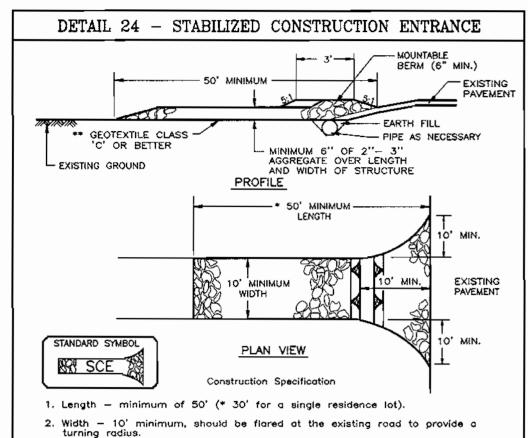




CLARK • FINEFROCK & SACKETT, INC. **ENGINEERS • PLANNERS • SURVEYORS** 7135 MINSTREL WAY . COLUMBIA, MD 21045 . (410) 381-7500 BALT. . (301) 621-8100 WASH. SEDIMENT AND EROSION CONTROL PLAN LOTS 9-12,42-46,58,89-93 COLUMBIA DRAWING 4 of 6 VILLAGE OF RIVER HILL SECTION 4 AREA 4
FIFTH (5th) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND CHECKED JOB NO. 00-024 FOR : DOUGLAS HOMES FILE NO. P.O. BOX 628 00-024**5**E

Ellicott City, Maryland 21043

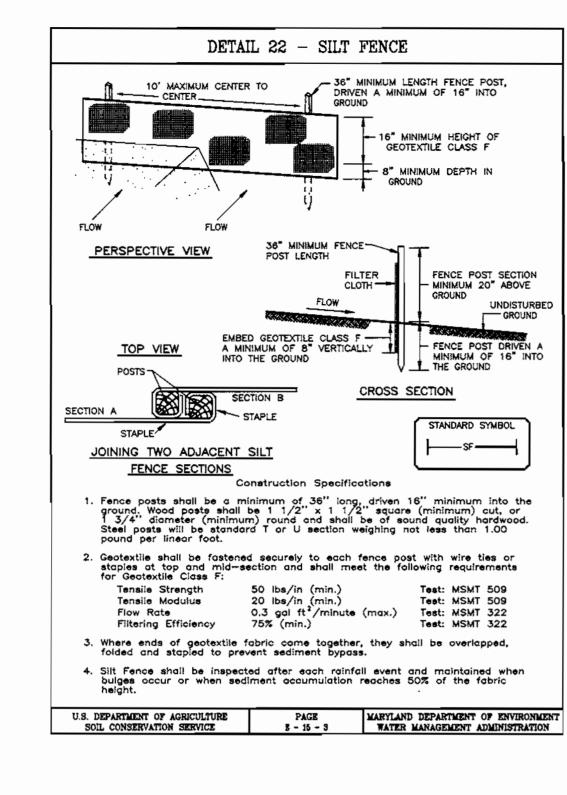


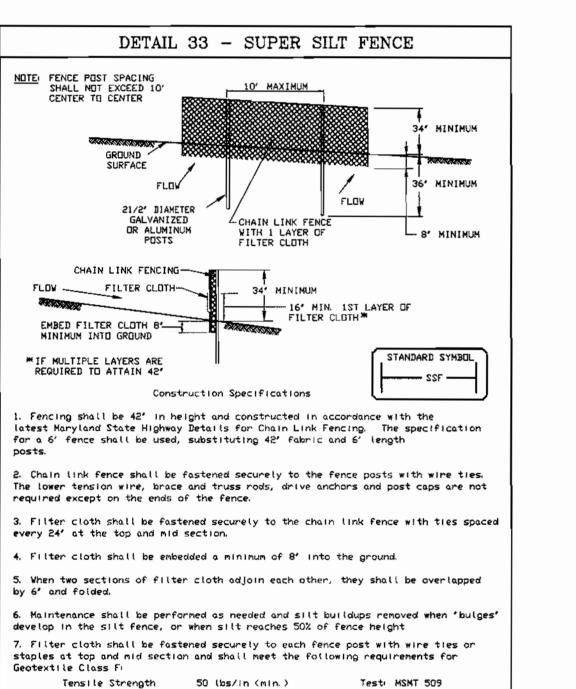


- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. ** The plan approval authority may not require single family residences to use geotextile.
- 4. Stone crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of
- 5. Surface Water -- all surface water flowing to or diverted toward construction 6. Surface Water — all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slapes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized con— struction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION





20 (bs/in (min.)

DEPARTMENT OF PLANNING & ZONING

0.3 gal/ft*/minute (max.) Testi MSMT 322

Tensile Modulus

U.S. DEPARTMENT OF AGRICULTURE

SCIL CONSERVATION SERVICE

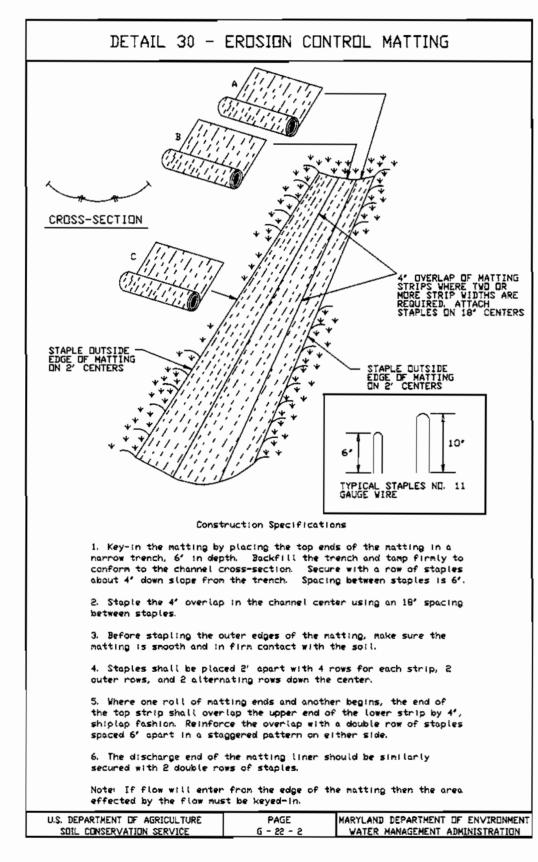
Filtering Efficiency 75% (min.)

Flow Rate

Testi MSMT 509

Test: MSMT 322

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



PERMANENT SEEDING NOTES

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

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

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/ 100 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 dolomatic limestone (92 lbs/ 1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10- fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper

SEEDING: For the periods March I thru April 30, and August I thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May I thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tans 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

MULCHING: Apply I 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. 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

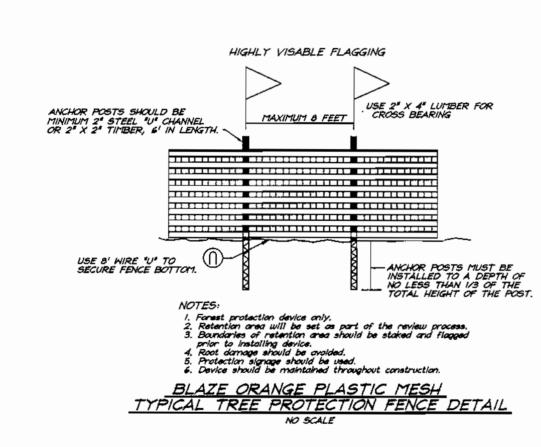
SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously

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

SEEDING: For periods March I 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 I thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November I 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 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. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT



FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation. <u>Purpose</u>

To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

slopes where: The texture of the exposed subsoil/parent material

This practice is limited to areas having 2:1 or flatter

is not adequate to produce vegetative growth, The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish

The original soil to be vegetated contains material toxic to plant growth,

continuing supplies of moisture and plant nutrients.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

d. The soil is so acidic that treatment with

Construction and Material Specifications

Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

Topsoil shall be a loam, sandy loam, clay loam, silt loarn, sandy clay loarn, loarny sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger that I and 1/2" in

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization -Section I - Vegetative Stabilization Methods and Materials.

21.0 STANDARDS AND SPECIFICATIONS

iii. For sites having disturbed areas over 5 ocres: i. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise

has been treated with soil sterilants or chemicals

the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight. Topsoil having soluble salt content greater than 500 parts per million shall not be used. d. No sod or seed shall be placed on soil soil which

used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

NOTE: Topsoil substitutes or amendments, as recommended by a qualified agranomist or soll scientist and approved by the appropriate approval authority, may be used in lieu of

natural topsoil. ii. Place topsoil (if required) and apply soil ammendments specified in 20.0 Vegetative Stabilization-Section I-Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" -8" layer and lightly compacted to a minimum thickness of 4".

Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be place while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

SEDIMENT AND EROSION CONTROL NOTES

A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).

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 1994 MARYLAND STANDARDS AND SPECS. FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within a) 7 calendar days for all perimeter sediment control stuctures, 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.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeters in accordance with Vol.I, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm

5. All disturbed areas must be stabilized within the time period specified above, in accordance with the 1994 MARYLAND STAND-ARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sad, temporary seeding and mulching (Sec G). Temporary stabilization with mulch alone can only be done when

recommended seeding dates do not allow for proper germination and establishment of grasses. 6. 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

7. SITE ANALYSIS:

Control Inspector.

Total Area of Site: _____ Area Disturbed: ____ Area to be roofed or paved:___ Area to be roofed or paved: 1.41 Acres
Area to be vegetatively stabilized: 2.60 Acres Offsite Waste/Borrow Area Location: *

8. 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 neces-sary by the Howard County DPW Sediment Control Inspector.

10. 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

II. Trenches for the construction of utilities shall be backfilled and stabilized within one working day, or is limited to three pipe lengths.

The total amount of silt fence = ______ The total amount of super silt fence = 1869 LF The total amount of earth dike = ____

15. The total amount of super diversion fence-* 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.

CONSTRUCTION SEQUENCE: NO. OF DAYS 1. Obtain grading permit, 2. Install tree protection fence. Install sediment and erosion control devices and stabilize. 4. Excavate for foundations, rough grade and temporarily stabilize.
5. Construct structures, sidewalks and driveways. 6. Final grade, install Erosion Control Matting and stabilize in accordance with standards and specifications. 7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.

* Delay construction of houses on lots:

42' CHAIN LINK FENCE----LAYER OF MARAFI MCF 1212 DR EQUAL DVER 3' MINIMUM ex. Ground 36' MINIMUM 21/2' DIAMETER-ALUMINUM FENCE POSTS PERSPECTIVE VIEW FENCE POST 42' CHAIN LINK FENCING -FILTER CLOTH EMBEDDED -STANDARD SYMBOL LAY FILER CLOTH I WIDE TRENCH. CURLEX MIN. 36' SECTION VIE₩ FENCING: FENCING SHALL BE 42' HIGH CHAIN LINK FENCE CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS 690.01 AND 690.02 THE SPECIFICATIONS FOR A 6'- 0' FENCE SHALL BE USED, SUBSTITUTE 42' FABRIC & 70' POSTS. POSTS SHALL BE PLACED WITHOUT CONCRETE EMBEDMENT. CHAIN LINK FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH TIES OR FILTER CLOTH TO BE FASTENED SECURELY TO CHAIN LINK 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.

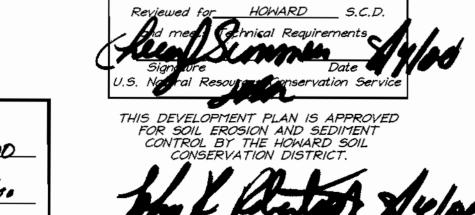
MAINTAINENCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

SUPER DIVERSION FENCE

OWNER / DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLANO 21044



DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and construction will be done accordina 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 Conservation District or their authorized agents, as are deemed

ENGINEER'S CERTIFICATE 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

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION





CLARK • FINEFROCK & SACKETT, INC. **ENGINEERS • PLANNERS • SURVEYORS** 7135 MINSTREL WAY . COLUMBIA, MD 21045 . (410) 381-7500 BALT. . (301) 621-8100 WASH. DESIGNED SCALE SEDIMENT AND EROSION CONTROL DETAILS PGC LOTS 9-12,42-46,58,89-93 COLUMBIA DRAWN DRAWING VILLAGE OF RIVER HILL ZH6 OF 6 SECTION 4 AREA 4 JOB NO. CHECKED FIFTH (5th) ELECTION DISTRICT 00-024 HOWARD COUNTY, MARYLAND

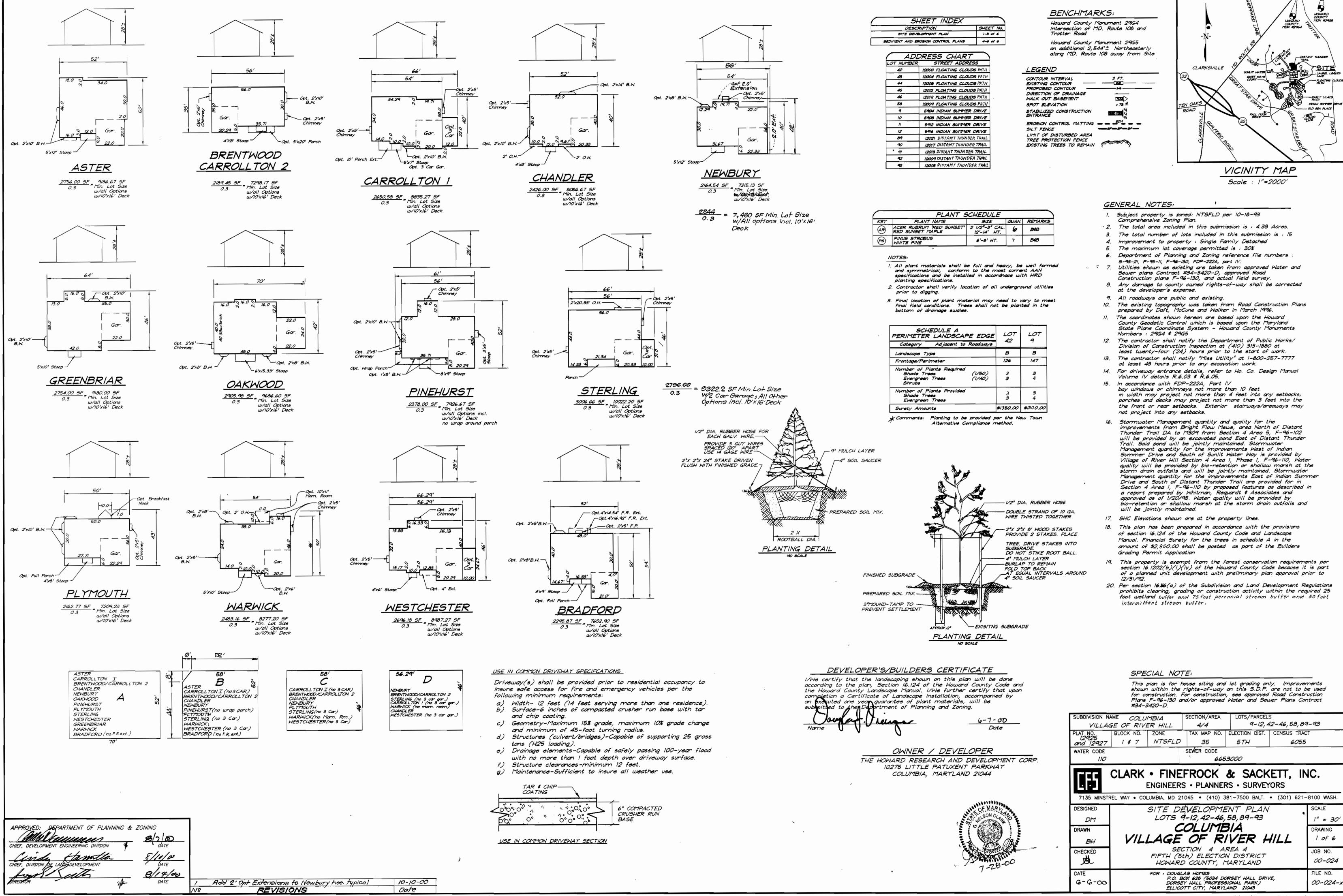
> ELLICOTT CITY, MARYLAND 21043 (7) F:/Library/Sed-details/sed-detail-base

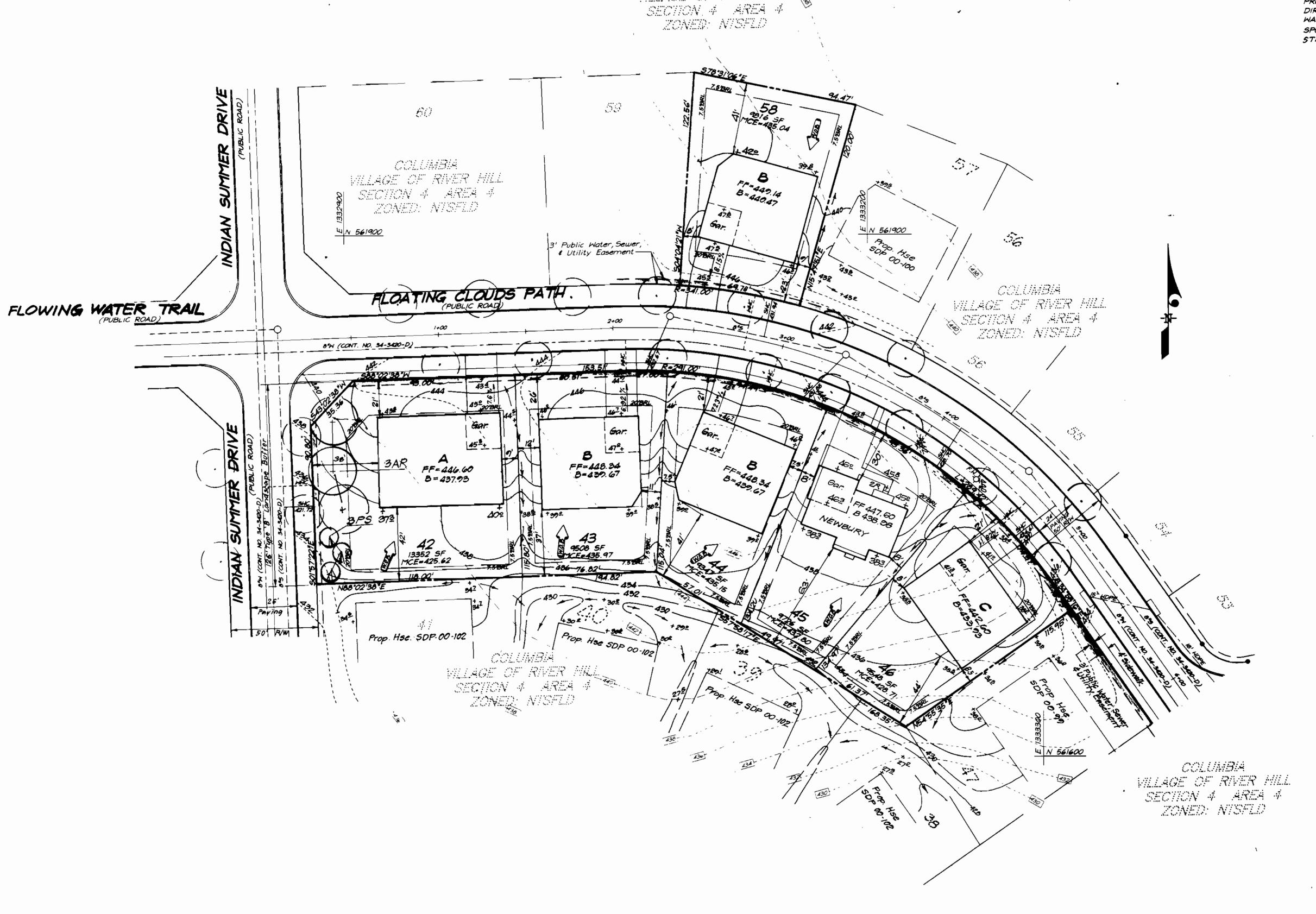
FOR : DOUGLAS HOMES P.O. BOX 628

3-31-00

FILE NO.

00-024**5**E





10-10-00 Date

/ Rev. hae. & grd. | of 45 Nº **REVISIONS** CONTOUR INTERVAL

EXISTING CONTOUR — 346

PROPOSED CONTOUR — 346

DIRECTION OF DRAINAGE
WALK OUT BASEMENT

SPOT ELEVATION +78 4

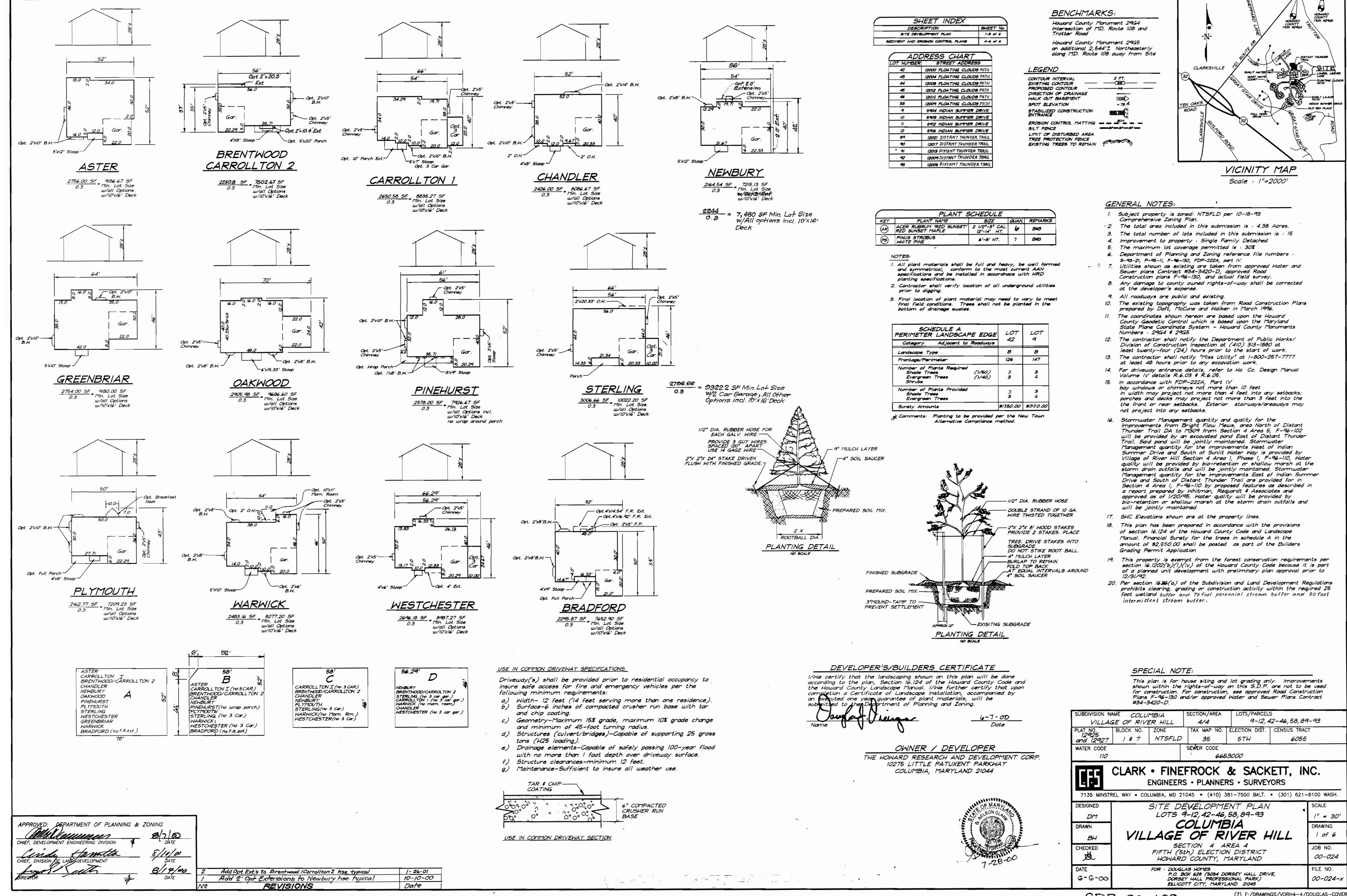
STREET TREES PER F-96-130

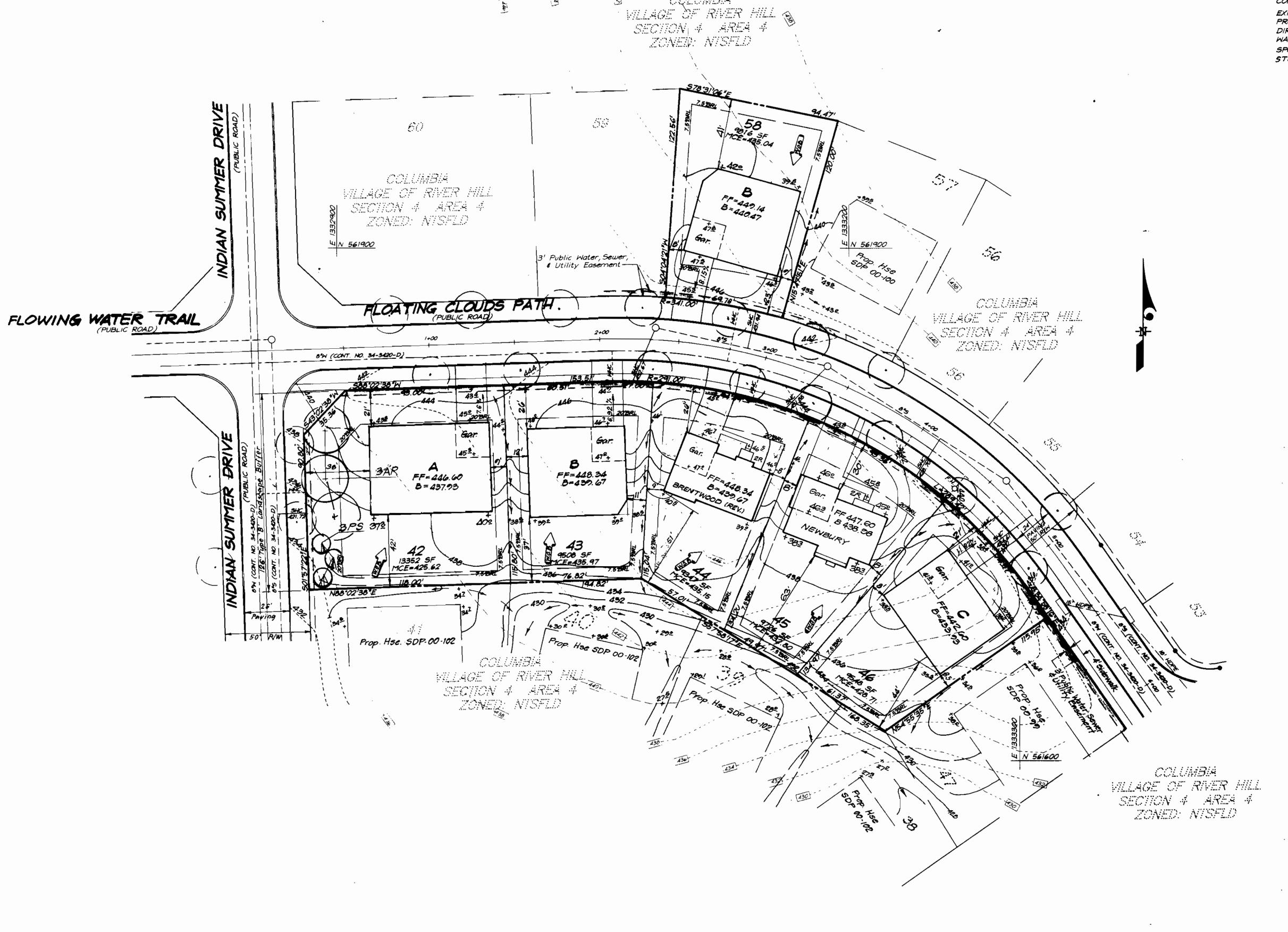
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DESIGNED	SITE DEVELOPMENT PLAN	SCALE		
BAL	LOTS 9-12,42-46,58,89-93	/" = 30'		
DRAWN	COLUMBIA	DRAWING		
ZH _{K.B.}	VILLAGE OF RIVER HILL	2 of 6		
CHECKED	SECTION 4 AREA 4 FIFTH (5th) ELECTION DISTRICT	JOB NO.		
BAL	HOWARD COUNTY, MARYLAND	00-024		
DATE	FOR : DOUGLAS HOMES	FILE NO.		
3-31-00-	P.O. BOX 426	00-024X		

Ellicott City, Maryland 21043





LEGEND CONTOUR INTERVAL EXISTING CONTOUR ---PROPOSED CONTOUR -DIRECTION OF DRAINAGE WALK OUT BASEMENT SPOT ELEVATION STREET TREES PER F-96-130

> OWNER / DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.
> 10275 LITTLE PATUXENT PARKWAY
> COLUMBIA, MARYLAND 21044



LEC	CLARK • FINEFROCK & SACKETT, ENGINEERS • PLANNERS • SURVEYORS	INC.
	ENGINEERS • PLANNERS • SURVEYORS	

7135 MINSTREL WAY - COLUMBIA, MD 21045 . (410) 381-7500 BALT . (301) 621-8100 WASH. SITE DEVELOPMENT PLAN LOTS 9-12,42-46,58,89-93 /'' = 30'

COLUMBIA
VILLAGE OF RIVER HILL
SECTION 4 AREA 4
FIFTH (5th) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND DRAWING 2 of 6 JOB NO. 00-024 FILE NO. 00-024X

2 Rev. hse. f grd. on lot 44 to show ex. conditions

/ Rev. hse. f grd. | of 45

Nº REVISIONS 10.10.00 Date

1-26-01

SDP 00-109

FOR : DOUGLAS HOMES P.O. BOX 628 Ellicott City, Maryland 21043

(9) D:VORH4-4/DOUGLAS/00-024