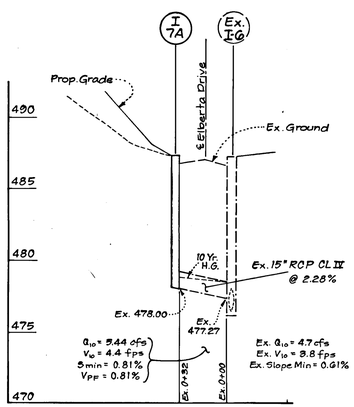
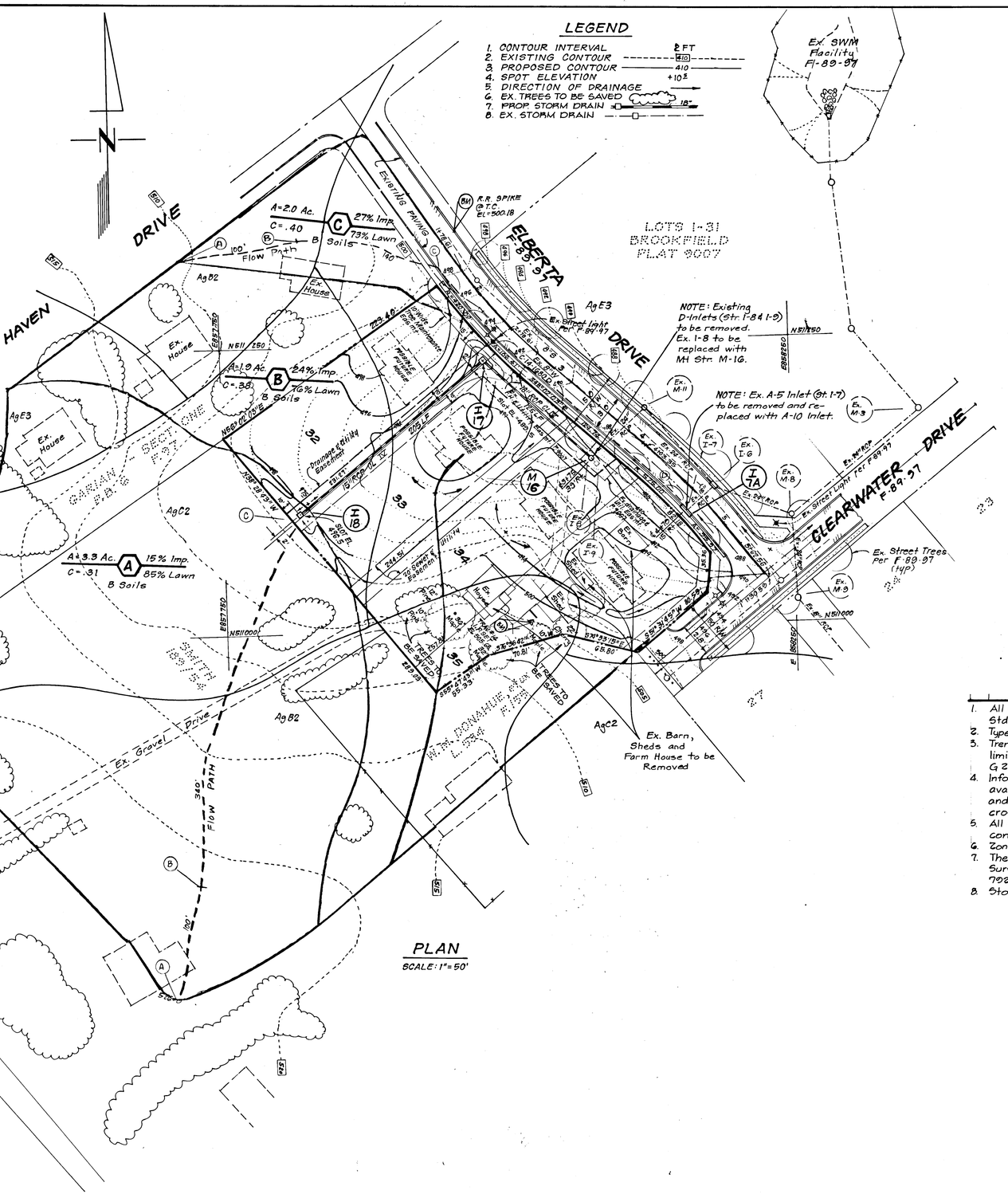


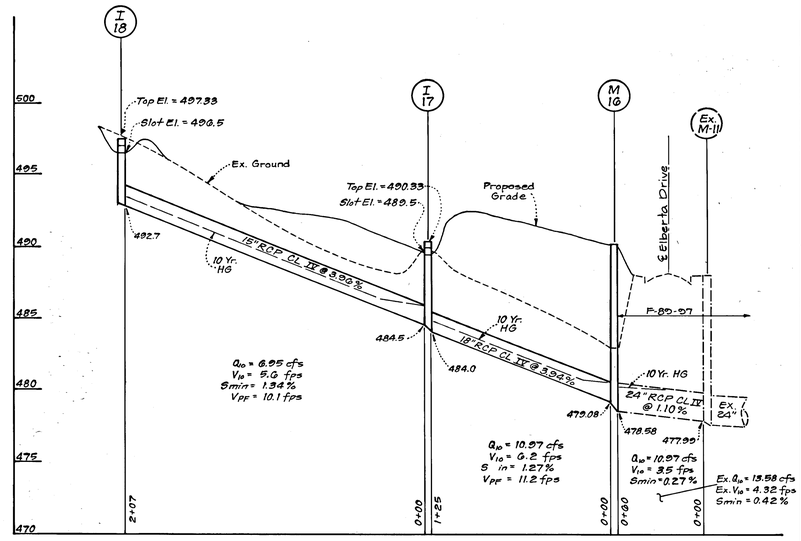
PROFILE

SCALES: HORIZ. 1"=50'
VERT. 1"=5'



PLAN

SCALE: 1"=50'



PROFILE

SCALES: HORIZ. = 1"=50'
VERT. = 1"=5'

STRUCTURE SCHEDULE △

No.	TYPE	INV. IN.	INV. OUT	TOP ELEVATION UPPER	TOP ELEVATION LOWER	REMARKS	LOCATION
I-7A	A-10 Inlet	——	Ex. 478.00	MEET Ex. 480.63		Ho. Co. Std. SD 4.02 W-2'-6"	See Plan
M-16	Std. Brick MH	479.08	Ex. 478.58	490.20		Ho. Co. Std. G5.01	See Plan
* I-17	D Inlet	484.5	484.0	SL 489.5	TOP 490.33	Ho. Co. Std. SD 4.11 2'-6" Sq.	See Plan
* I-18	D Inlet	492.7	——	SL 490.5	TOP 497.33	Ho. Co. Std. SD 4.11 2'-6" Sq.	See Plan

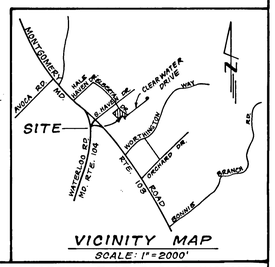
NOTES: △ All inverts to be fully developed.
* Slots in all four sides.

GENERAL NOTES

1. All work shall be done in accordance with "Ho. Co. Design Manual" Vol. IV Stds. and Specs. and Details for Construction, 1980 Amendments.
2. Types of Storm Drainage refer to the std. details of Ho. Co. & M.D.S.H.A.
3. Trench compaction for Storm Drains within road or street right-of-way limits shall be in accordance with "Ho. Co. Design Manual, vol. IV" Std. G 2.01.
4. Information concerning underground utilities was obtained from available records, but the Contractor must determine the exact location and elevation of mains by digging test pits, by hand, at all utility crossings well in advance of construction.
5. All utility companies shall be notified 24 hours in advance of construction.
6. Zoning: R-20
7. The Contractor or Developer shall contact the Construction Inspection Survey Division 24 hours in advance of commencement of work 792-7272.
8. Stormwater Management is provided off-site. See F-89-97.

PIPE SCHEDULE

SIZE	TYPE	LENGTH
15"	RCP CL. IV	207 LF
18"	RCP CL. IV	125 LF



VICINITY MAP

SCALE: 1"=2000'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — JH — 3/26/91 DATE

CHIEF, BUREAU OF HIGHWAYS — 3/26/91 DATE

CHIEF, BUREAU OF ENGINEERING — 4-1-91 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 4/4/91 DATE

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

STATE OF MARYLAND — G. NELSON CLARK — NO. 7138 — REGISTERED PROFESSIONAL ENGINEER

12-10-90

DESIGNED KIWM	STORM DRAIN PLAN LOTS 32 THRU 35 BROOKFIELD SECTION 2	SCALE 1"=50'
DRAWN LAI		DRAWING 1 OF 2
CHECKED JLS	TAX MAP #31 PARCEL 551 2nd ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	JOB NO. 89-133
DATE Oct., 1990	OWNER & DEVELOPER CHATEAU HOMES, INC. 8805 Columbia 100 Parkway #100 Columbia, Maryland 21045	FILE NO. 89-133-D

1453

F-91-72

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 square 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 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 (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. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of 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 1½ 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

Apply to graded or cleared areas likely to be redisturbed where a short-term 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: 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 2½ 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). 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 1½ 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. On slopes, 8 ft or higher, use 348 gal 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.

SEDIMENT CONTROL NOTES

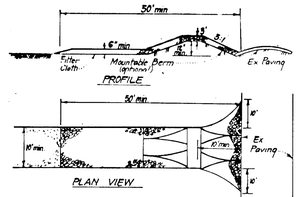
1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2617)
2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3) Following initial soil disturbance or redisturbance, 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.
4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5) 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.
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 Control Inspector
7) Site Analysis:

Total Area of Site	1.84	Acres
Area Disturbed	1.41	Acres
Area to be roofed or paved	0	Acres
Area to be vegetatively stabilized	1.41	Acres
Total Cut	6590	Cu. yds
Total Fill	1115	Cu. yds
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.
9) Additional sediment control must be provided, if deemed necessary 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 made.
11) If houses are to be constructed on a "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented.

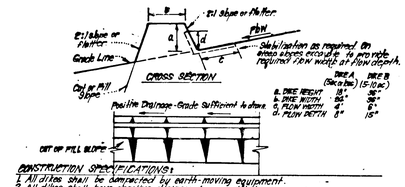
12) The total amount of straw bale dikes/silt fence equals -0- L.F.

* It is the responsibility of the contractor to identify spoil/borrow site and notify HSCD. of the site and its Grading Permit number at the time of construction.



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 30 foot minimum length would apply.
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) feet minimum, but not less than the full width at points where ingress or egress occurs.
5. 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.
6. 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.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-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 rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-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.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE

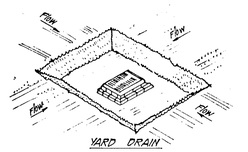


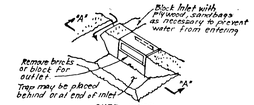
CONSTRUCTION SPECIFICATIONS:
1. All dikes shall be compacted by earth-moving equipment.
2. All dikes shall have adequate outlet to an outlet.
3. Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized safe outlet.
5. 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.
6. 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.

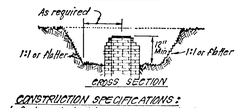
TYPE OF TREATMENT	CHANNEL GRADE	FLOW CHANNEL STABILIZATION DIKE A	DIKE B
1	0.5 - 3.0%	Seed & Straw Mulch	Seed w/Straw Mulch
2	3.1 - 5.0%	Seed & Straw Mulch	Seed w/Jute, or Excelsior; Sod, 2" Stone
3	5.1 - 8.0%	Seed w/Jute or Sod, 2" Stone	Lined Rip Rap 4"-8" Stone
4	8.1 - 20.0%	Lined Rip Rap 4"-8" Stone	Engineering Design

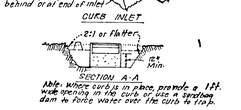
A. Stone to be 2" Stone or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
B. Rip Rap to be 4"-8" in a layer at least 8" thick, pressed into soil.
C. Approved equivalents can be established for any of the above materials.
7. Periodic inspection and required Maintenance must be provided after each rain.

EARTH DIKE DETAIL (E.D.)
NO SCALE









Note: Where curb is in place, provide a 1ft. wide opening in the curb or use a gravel dam to force water over the curb to trap.

STORM INLET SEDIMENT TRAP (S.I.S.T.) ST III
NO SCALE

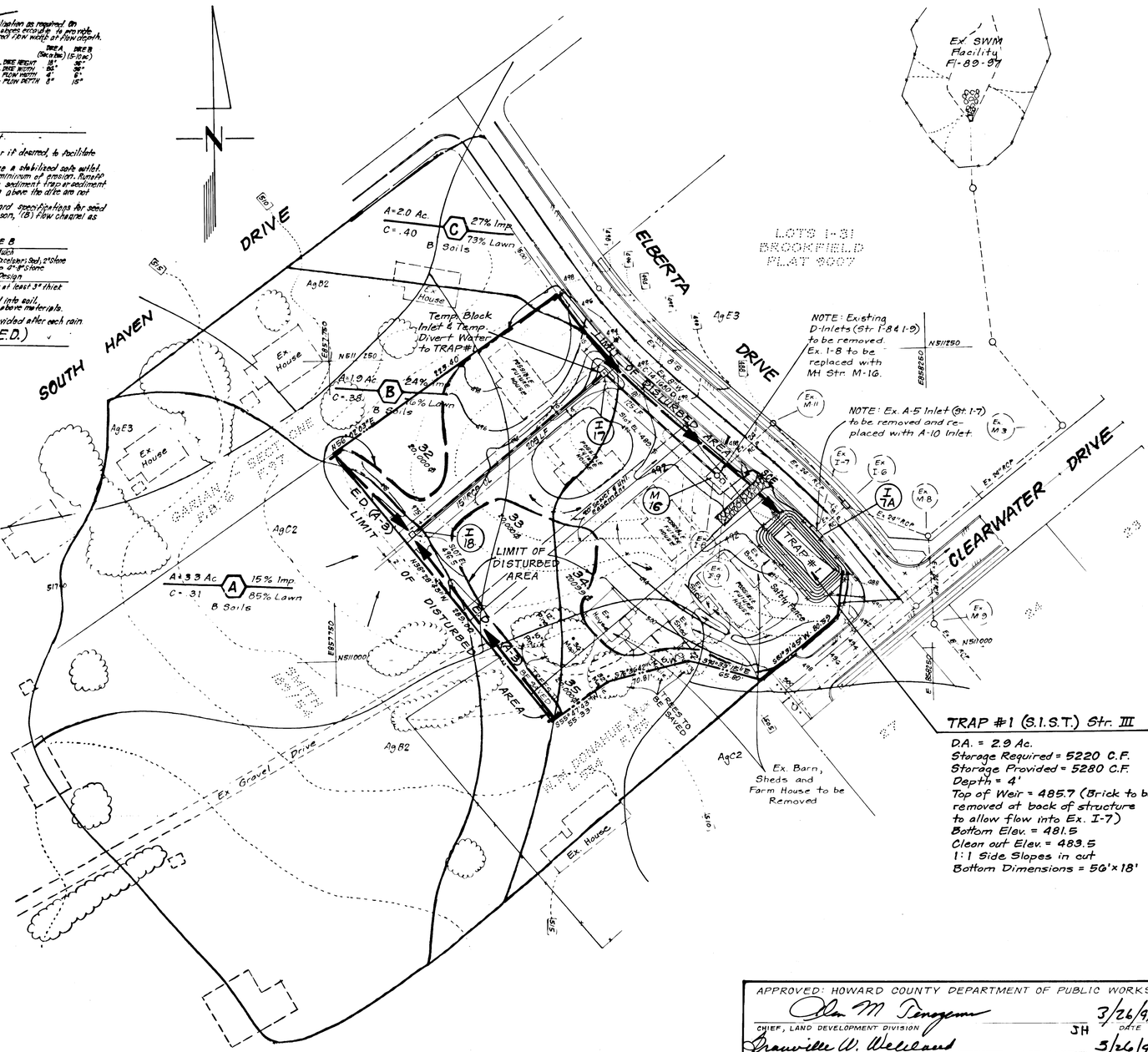
LEGEND

1. CONTOUR INTERVAL 2 FT
2. EXISTING CONTOUR 410
3. PROPOSED CONTOUR 410
4. SPOT ELEVATION +105
5. DIRECTION OF DRAINAGE
6. WALK-OUT BASEMENT W.O.B.
7. EARTH DIKE E.D. (A-3)
8. STABILIZED CONSTRUCTION ENTRANCE S.C.E.
9. EX. TREES TO BE SAVED

CONSTRUCTION SEQUENCE

	No. of Days
1. Obtain grading permit.	7
2. Install S.C.E.	1
*3. Construct storm drainage, including I-7A.	21
4. Install E.D's & Trap No. 1.	7
5. Clear and Rough grade site.	7
6. Fine grade and stabilize all remaining disturbed area in accordance with Stds. and Specs.	14
7. Upon completion of all work and with the permission of the sediment control inspector, remove sediment and erosion controls.	

* Area disturbed by storm drain installation shall be immediately stabilized at the end of each day. Storm drain must be complete & functioning before grading occurs



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — JH — 3/26/91 DATE

CHIEF, BUREAU OF HIGHWAYS — 3/26/91 DATE

CHIEF, BUREAU OF ENGINEERING — 4-1-91 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 3/27/91 DATE

Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements
Signature
3/6/91 Date
U.S. Soil Conservation Service

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

APPROVED 3/6/91 DATE

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 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."

Signature of Developer/Builder — 12/7/90 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 — 12-10-90 DATE

STATE OF MARYLAND — G. NELSON CLARK — NO. 7139 — REGISTERED PROFESSIONAL ENGINEER

12-10-90

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7125 MINSTREL WAY • COLUMBIA MD 21045 • (301) 381-7500 BALTO • (301) 621-8100 WASH

DESIGNED KIWM	SEDIMENT AND EROSION CONTROL PLAN LOTS 32 THRU 35 BROOKFIELD SECTION 2	SCALE 1"=50'
DRAWN LAI		DRAWING 2 of 2
CHECKED JLS	TAX MAP #31 PARCEL 551 2nd ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	JOB NO. 89-133
DATE Oct., 1990	OWNER & DEVELOPER CHATEAU HOMES, INC. 8805 Columbia 100 Parkway #100 Columbia, Maryland 21045	FILE NO. 89-133-D

1452

1-11-12