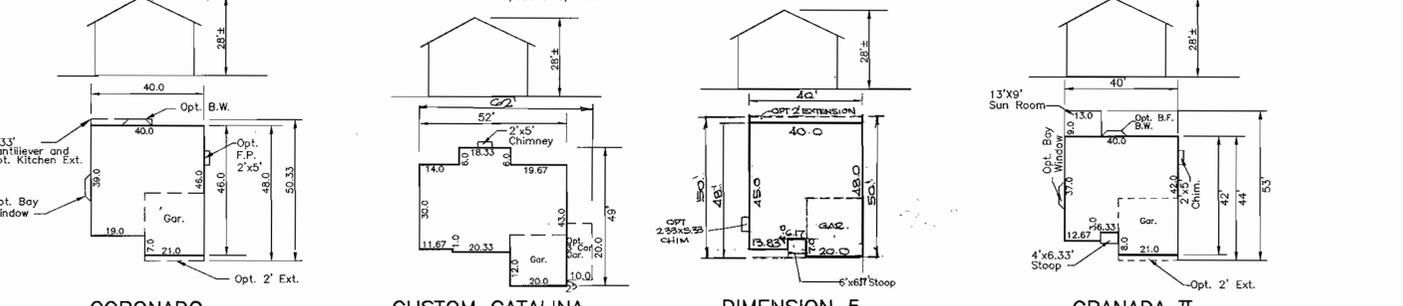
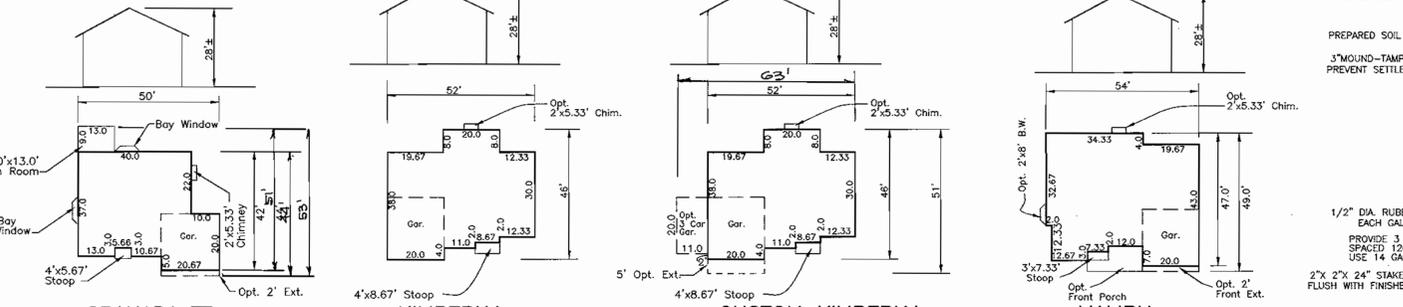


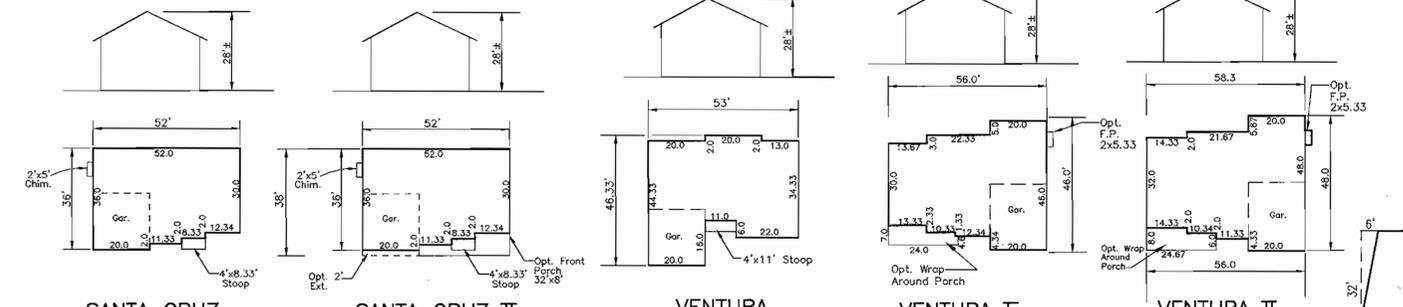
PLAN NAME	AREA	MIN. LOT SIZE	DECK
BERKELEY II	3443.97 SF	0.4	w/10'x16' Opt. Deck
CALIFORNIA	3005.69 SF	0.4	w/10'x16' Opt. Deck
CARMEL	2314.64 SF	0.4	w/10'x16' Opt. Deck
CLAREMONT	2164.35 SF	0.4	w/10'x16' Opt. Deck



PLAN NAME	AREA	MIN. LOT SIZE	DECK
CORONADO	1985.33 SF	0.4	w/10'x16' Opt. Deck
CUSTOM CATALINA	1960.31 SF	0.4	w/10'x16' Opt. Deck
DIMENSION 5	1725.0 SF	0.4	w/8'x11' Opt. Deck
GRANADA II	1885.33 SF	0.4	w/10'x12.5' Opt. Deck Max.



PLAN NAME	AREA	MIN. LOT SIZE	DECK
GRANADA III	1749.02 SF	0.4	w/10'x16' Opt. Deck
KIMBERLY	1986.02 SF	0.4	w/10'x16' Opt. Deck
CUSTOM KIMBERLY	2523.34 SF	0.4	w/10'x16' Opt. Deck
MALIBU	2483.98 SF	0.4	w/10'x16' Opt. Deck



PLAN NAME	AREA	MIN. LOT SIZE	DECK
SANTA CRUZ	1785.30 SF	0.4	w/10'x16' Opt. Deck
SANTA CRUZ II	1785.30 SF	0.4	w/10'x16' Opt. Deck
VENTURA	2143.49 SF	0.4	w/10'x16' Opt. Deck
VENTURA I	2345.64 SF	0.4	w/10'x16' Opt. Deck

DEVELOPER'S/BUILDERS CERTIFICATE

I/We certify that the landscaping will be done according to the plan, Section 16.124 of the Howard County Subdivision and Land Development and Landscaping Manual. I/We further certify that upon completion, a letter of notice, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

APPROVED: *C. Allan Washak* DATE: 10-28-02

Reviewed for HOWARD S.C.D. and meets Technical Requirements and meets U.S. Natural Resources Conservation Service. Signature: *[Signature]* Date: 11/14/03

APPROVED: DEPARTMENT OF PLANNING & ZONING. CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 11/14/03

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 11/14/03

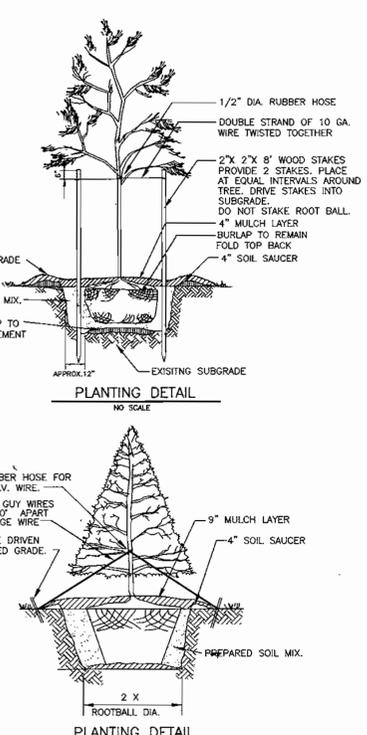
DIRECTOR: *[Signature]* DATE: 11/14/03

KEY	PLANT NAME	SIZE	QUAN.	REMARK
(TC)	TILIA CORDATA 'GREENSPIRE'	2 1/2"-3" CAL.	4	B&B
(PS)	PINUS STROBUS WHITE PINE	14"-16" HT.	2	B&B

Lot Number	Lot Classification	Internal Landscaping Required (# of Shade Trees)	Type B Required (See Schedule A)		Shade Credit*	Remaining Shade Tree Obligation	Total Trees Required	
			Shade	Evergreen			Shade	Evergreen
Lots 36-38, 68-73, 136 & 137	Non-Wooded (Medium Residential Lot)	5 trees per lot	n/a	n/a	0	0	55	0
Lot 67	Non-Wooded (Medium Residential Lot)	5 trees per lot	2	2	3	2	4	2
Total Trees Required							59	2

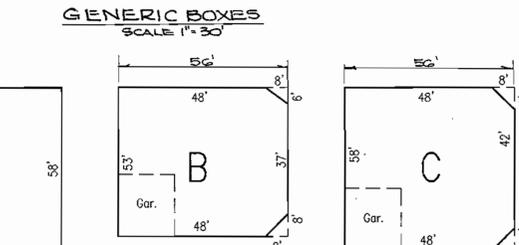
Lot Number	Perimeter	Category	Landscape Type	Linear Ft. of Roadway Frontage Perimeter	Number of Plants Required		
					Shade Trees	Evergreen Trees	Total Trees
67	P-1	Adjacent to	B	94 LF.	2	2	4

- NOTES:**
- All plant materials shall be full and heavy, be well formed and symmetrical and conform to the most current AAN specifications.
 - Contractor shall verify location of all underground utilities prior to digging.
 - Final location of plant material may need to vary to meet final field conditions. Trees shall not be planted in the bottom of drainage swales.
 - This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code, the Landscape Manual and the Development Criteria approved by the Planning Board on July 1, 1999 per Case No. PB-339. Surety for the required landscaping has been posted as part of the Builder's Grading Permit in the amount of \$18,000 for 59 shade trees and 2 evergreen trees.

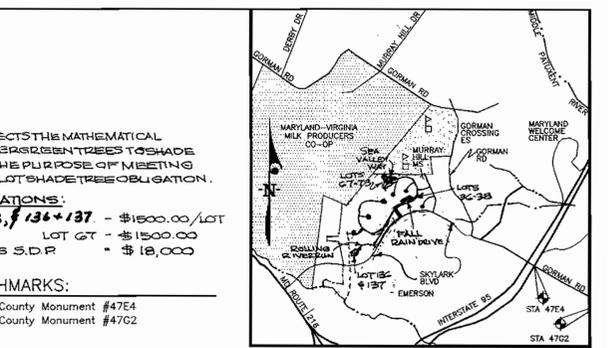


- Perimeter landscaping and street trees shall be provided in accordance with section 16.124 of the Howard County Code, the Landscape Manual and the Development Criteria approved by the Planning Board on 7/1/99 per case no. PB-339 as shown on the approved Road Construction Drawings filed under F-01-137. Landscape Requirements: Lots 36-38, 68-73, 136 & 137: Internal lot landscaping shall be provided in accordance with Development Criteria approved by the Planning Board on 7/1/99 per case no. PB-339 and section 16.124 of the Howard County Code and Landscaping Manual. A \$1,500 per lot survey shall be posted as part of the Builders' Grading Permit to cover the installation of the five (5) internal landscaping trees required for each of these lots. Corner lot 67: In addition to the required internal lot landscaping, corner lot 67 shall provide a "Type B" perimeter landscape buffer in accordance with section 16.124 of the Howard County Code and Landscape Manual. This required "Type B" perimeter landscape plantings have been credited toward the internal landscape requirements, with evergreens equating to shade trees at 2:1 ratio. A \$1,500 landscape survey shall be posted as part of the builders' grading permit for this lot. The total surety required for the twelve (12) lots included in this plan subdivision is \$18,000.
- Driveways shall be provided prior to issuance of a use and occupancy permit for any new dwellings to insure safe access for fire and emergency vehicles per the following minimum requirements:
 - Width-12' (14' serving more than one residence);
 - Surface-6" of compacted crusher run base with tar and chip coating (1-1/2" min.);
 - Geometry-max. 15% grade, max. 10% grade change and min. 45' turning radius;
 - Structures (culverts/bridges)-capable of supporting 25 gross tons (H25 loading);
 - Drainage Elements-capable of safely passing 100-year flood with no more than 1 foot depth over driveway surface;
 - Maintenance-sufficient to insure all weather use.
- This site development plan is subject to the fifth edition of the Subdivision and Land Development Regulations.
- Open space requirements for these lots have been provided under F-01-137.
- Minimum building restriction setbacks from property lines and public road rights-of-ways are to be in accordance with the Development Criteria approved with the Comprehensive Sketch Plan S-99-12 and the decision and order for PB-339 approved on July 1, 1999. Lot coverage by buildings within the single family detached land use areas shall not exceed 40%. No limitation is imposed upon the area used for sidewalks, paved parking areas, patios, decks, landscaping and similar minor structures.

LOT NUMBER	STREET ADDRESS
36	10009 FALL RAIN DRIVE
37	10013 FALL RAIN DRIVE
38	10017 FALL RAIN DRIVE
67	9901 SEA VALLEY WAY
68	9905 SEA VALLEY WAY
69	9909 SEA VALLEY WAY
70	9913 SEA VALLEY WAY
71	9917 SEA VALLEY WAY
72	9908 SEA VALLEY WAY
73	9912 SEA VALLEY WAY
136	10040 ROLLING RIVER RUN
137	10044 ROLLING RIVER RUN



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



VICINITY MAP Scale: 1"=2000'

- GENERAL NOTES:**
- Subject property is zoned: PEC-MXD-3; per case #ZB-979-M granted on 9-3-98 by the Zoning Board.
 - The total area included in this submission is: 2.865 Acres.
 - The total number of lots included in this submission is: 12
 - Improvement to property: Single Family Detached
 - Department of Planning and Zoning reference file numbers: F-01-137, S-99-12, PB-339, ZB-979-M, P-00-15, PB-359, and WP-01-22.
 - Utilities shown as existing are taken from approved Water and Sewer plans Contract #24-3966-D and approved Road Construction plans F-01-137.
 - Any damage to county owned rights-of-way shall be corrected at the developer's expense.
 - All roadways are public and existing.
 - The existing topography was taken from Road Construction Plans prepared by Duff, McCune & Walker, Inc. Topography was dated November, 2001.
 - The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System - Howard County Monuments Numbers: 47E4 & 47G2
 - The contractor shall notify the Department of Public Works/Division of Construction Inspection at (410) 313-1880 at least 5 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.
 - For driveway entrance details, refer to Ho. Co. Design Manual Volume IV details R.6.03 & R.6.05.
 - In accordance with Section 128 of the Ho. Co. zoning regulations, bay windows, chimneys or exterior stairways not more than 16 feet in width may project not more than 4 feet into any setbacks, porches, or decks, open or enclosed may project not more than 10 feet into the front or rear yard setback. The 15' minimum distance between structures does not apply to referenced features nor between open decks and a dwelling structure or another deck. As an advisory, the 15' distance does apply to the second story overhang.
 - The minimum setbacks for structures shall be as follows: Front: 15' from the right-of-way to the house or garage Sides: 5' to the property line with a minimum of 15' between structures Rear: 10' from the property line to an open deck 20' from the property line to the house Any deviation from these setback requirements will require site development plan approval by the HOWARD COUNTY PLANNING BOARD.
 - Water quality and quantity treatment for the proposed roadways and lot is being provided by extended detention facility, this facility will be privately owned and maintained by the homeowners association.
 - No clearing, grading or construction is permitted within the required wetland, stream buffers or forest conservation areas except for the work associated with the approved construction plans. All forest to remain within the areas shown as "Forest Conservation Easement" meet the minimum requirements of the forest conservation act.
 - No clearing, grading or construction is permitted within the forest conservation easement. However, forest management practices as defined in the deed of forest conservation are allowed.
 - SHC Elevations shown are at the property line.
 - This plan complies with the requirements of section 16.1200 of the Howard County Code of Forest Conservation by retaining 16.77 acres ± and reforesting 5.03 acres ± as part of the overall development of Emerson, Section 2. The excess 4.5 ± acres of reforestation may be used towards meeting the obligations of future phases of Emerson, Section 2, F-01-137.

SPECIAL NOTES:

This plan is for house siting and lot grading only. Improvements shown within the right-of-way on this S.D.P. are not to be used for construction. For construction, see approved Road Construction Plans F-01-137 and/or approved Water and Sewer Plans Contract # 24-3966-D

SHEET INDEX

DESCRIPTION	SHEET NO.
SITE DEVELOPMENT PLANS	1 & 2 of 4
SEDIMENT & EROSION CONTROL PLAN	3 of 4
SEDIMENT & EROSION CONTROL DETAILS	4 of 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOTS/PARCELS
EMERSON	SECTION 2 PHASE 1B	36-38, 67-73, 136 & 137

PLAT NO.	BLOCK NO.	ZONE	TAX MAP NO.	ELECTION DIST.	CENSUS TRACT
15203-15209	8	PEC-MXD3	47	6TH	6068.02

WATER CODE	SEWER CODE
E-15	7460000

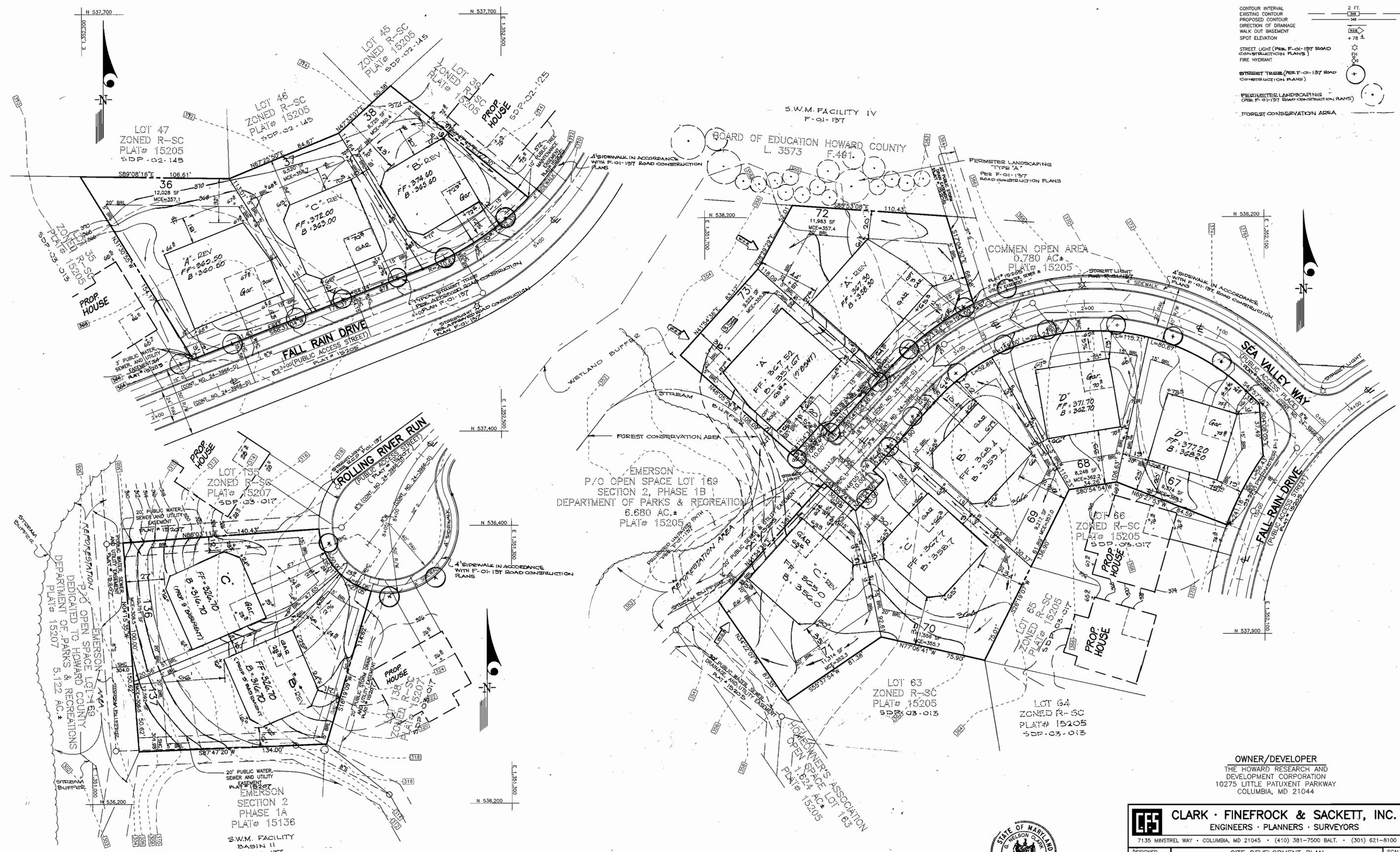
CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS · PLANNERS · SURVEYORS
7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500 BALT. · (301) 621-8100 WASH.

DESIGNED	SITE DEVELOPMENT PLAN	SCALE
RMT / KOL	LOTS 36-38, 67-73, 136 & 137 SINGLE FAMILY UNITS	1" = 30'
DRAWN	EMERSON	DRAWING
JPH/BC	TAX MAP 47 PART OF PARCELS 3 & 857 BLOCK 8 SECTION 2 PHASE 1B	1 OF 4
CHECKED	KOL	JOB NO.
KOL	SIXTH (6TH) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	02-076
DATE	FOR: ALLAN HOMES, INC 10260 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21076 (410) 381-1414	FILE NO.
10-25-02		02-076-X

(11)C:\DRAWINGS\02076 EMERSON\DWG\02076TS.DWG

LEGEND

- CONTOUR INTERVAL 2 FT.
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- WALK OUT BASEMENT
- SPOT ELEVATION
- STREET LIGHT (PER F.O.I-137 ROAD CONSTRUCTION PLANS)
- FIRE HYDRANT
- STREET TREE (PER F.O.I-137 ROAD CONSTRUCTION PLANS)
- PERIMETER LANDSCAPING (PER F.O.I-137 ROAD CONSTRUCTION PLANS)
- FOREST CONSERVATION AREA



APPROVED: DEPARTMENT OF PLANNING & ZONING
 DATE: 3/14/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 DATE: 3/17/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/17/03
 DIRECTOR



CLARK · FINEFROCK & SACKETT, INC.
 ENGINEERS · PLANNERS · SURVEYORS
 7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500 BALT. · (301) 621-8100 WASH.

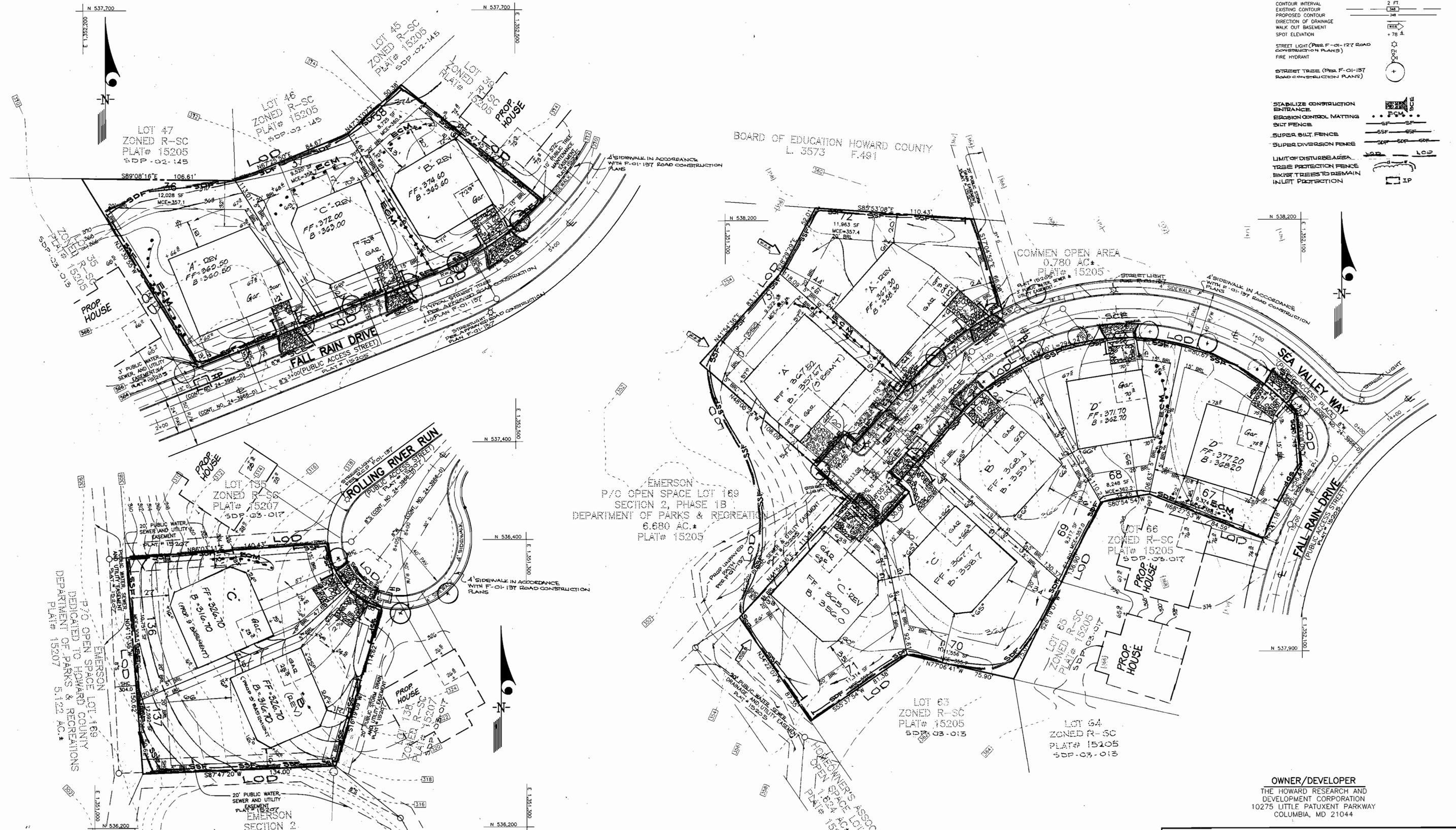
DESIGNED RMT / KQL	SITE DEVELOPMENT PLAN LOTS 36-38, 67-73, 136 & 137.	SCALE 1" = 30'
DRAWN JPH / KQL	EMERSON (SINGLE FAMILY UNITS)	DRAWING 2 OF 4
CHECKED KQL	TAX MAP 47 PART OF PARCEL 3 & 837 BLOCK B SECTION 2 PHASE 1B SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 02-076
DATE 10-25-02	FOR: ALLAN HOMES, INC. 10260 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21076 (410) 281-1414	FILE NO. 02-076-X

SDP-03-029

(11)C:\DRAWINGS\02076 EMERSON\DWG\02076SDP.DWG

LEGEND

CONTOUR INTERVAL	2 FT.
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
DIRECTION OF DRAINAGE	→
WALK OUT BASEMENT	---
SPOT ELEVATION	+ 78.4
STREET LIGHT (PER F-01-127 ROAD CONSTRUCTION PLANS)	⊙
FIRE HYDRANT	⊙
STREET TREE (PER F-01-127 ROAD CONSTRUCTION PLANS)	⊙
STABILIZE CONSTRUCTION ENTRANCE	---
EROSION CONTROL MATTING	---
SILT FENCE	---
SUPER SILT FENCE	---
SUPER DIVERSION FENCE	---
LIMIT OF DISTURBANCE AREA	---
TREE PROTECTION FENCE	---
EXIST TREES TO REMAIN	---
INLET PROTECTION	---



EMERSON
P/O OPEN SPACE LOT 163
SECTION 2, PHASE 1B
DEPARTMENT OF PARKS & RECREATION
6.680 AC. ±
PLAT# 15205

COMMON OPEN AREA
0.780 AC. ±
PLAT# 15205

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

CLARK · FINEFROCK & SACKETT, INC. ENGINEERS · PLANNERS · SURVEYORS		
7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500 BALT. · (301) 621-8100 WASH.		
DESIGNED DAB	SEDIMENT/EROSION CONTROL PLAN LOTS 36-38, 67-73, 136 & 137	SCALE 1" = 30'
DRAWN PH BMT	EMERSON (SINGLE FAMILY UNITS) TAX MAP 47 PART OF PARCEL 3 & 837 BLOCK 8 SECTION 2 PHASE 1B SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 3 OF 4
CHECKED OAB		JOB NO. 02-076
DATE 10-25-02	FOR: ALLAN HOMES, INC. 10260 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21076 (410) 381-1414	FILE NO. 02-076-X

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.
C. Allan Vashak 10-25-02
NAME DATE

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.
G. Nelson Clark 10-28-02
G. NELSON CLARK DATE

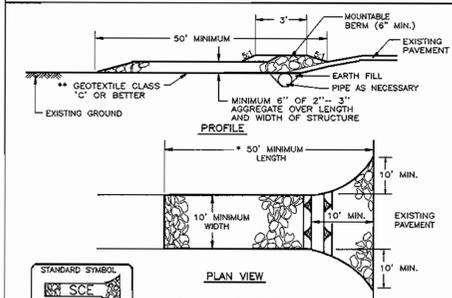


Reviewed for HOWARD S.C.D. and meets Technical Requirements
Jim Meyer 3-11-03
Signature Date
U. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robitson 3-11-03
Howard S.C.D. Date

APPROVED: DEPARTMENT OF PLANNING & ZONING
John H. Hanes 3/11/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
John Hanes 3/11/03
CHIEF, DIVISION OF LAND DEVELOPMENT MK
David M. Carter 3/12/03
DIRECTOR DATE

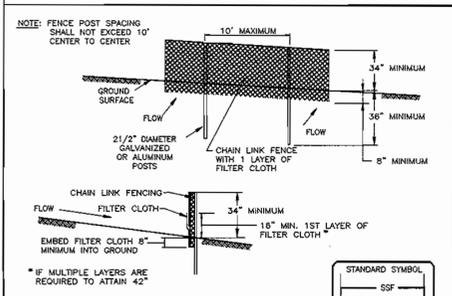
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- Construction Specifications**
- Length - minimum of 50' (+ 30' for a single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - 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.
 - 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 the entrance.
 - 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 mounded berm with 5:1 slopes 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 construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 7-17-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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DETAIL 33 - SUPER SILT FENCE



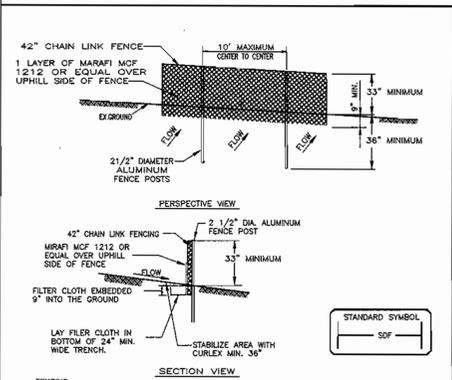
- Construction Specifications**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and all bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
- | | | |
|-----------------------|--|----------------|
| Tensile Strength | 90 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal/ft ² /minute (max.) | Test: MSMT 322 |
| Filtration Efficiency | 75% (min.) | Test: MSMT 322 |

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 8-2-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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APPROVED: DEPARTMENT OF PLANNING & ZONING
[Signature] 3/10/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/10/03

APPROVED: DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES
[Signature] 3/10/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/10/03

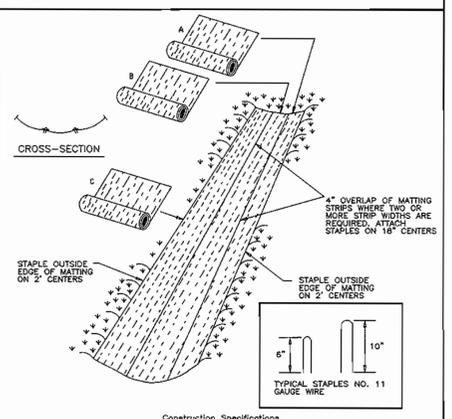
DETAIL - SUPER DIVERSION FENCE



- FENCING:**
- CHAIN LINK FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH TIES OR STAPLES.
 - 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.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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DETAIL 30 - EROSION CONTROL MATTING



- Construction Specifications**
- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shingle fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 6-28-2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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Reviewed for HOWARD S.C.D. and meets Technical Requirements
[Signature] 3-11-03
 U.S. Natural Resources Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 3-11-03
 Date

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition: Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose: 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 unacceptably soil gradation.

Conditions Where Practice Applies:

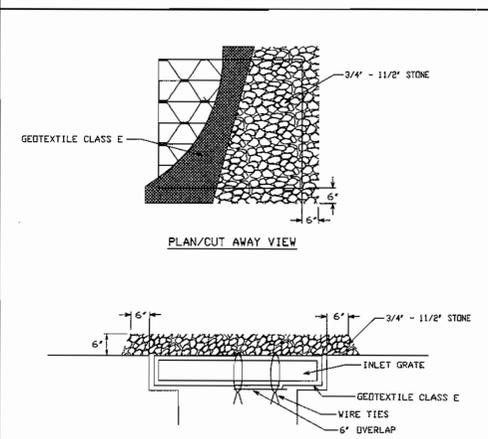
- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.

- 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.**
- Construction and Material Specifications:**
- Topsoil salvaged from the existing site may be used provided that it meets the standards 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 Experiment Station.
 - Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy 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, silt, coarse fragments, gravel, sticks, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
 - 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.

Construction and Material Specifications:

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Sit Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4"-8" higher in elevation.
- 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.
- Topsoil shall not be placed 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 seeded preparation.

DETAIL 23B - AT GRADE INLET PROTECTION



- Construction Specifications**
- Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
 - Place 3/4" x 1 1/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E-16-5A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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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 of this 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 inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

[Signature] 8-15-02
 NAME DATE

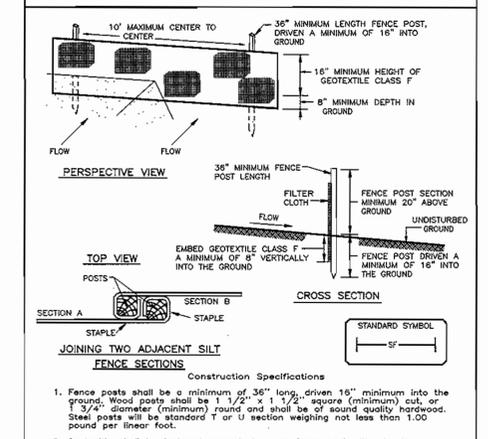
PERMANENT SEEDING NOTES

- APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.
- SOL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:
- 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.
 - Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./100 sq.ft.) and apply 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 (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 unrotted small grain straw immediately after seeding. Another 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 reseeding.

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DETAIL 22 - SILT FENCE



- Construction Specifications**
- Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 1/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard for U section weighing not less than 1.00 pound per linear foot.
 - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
- | | | |
|-----------------------|--|----------------|
| Tensile Strength | 50 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal ft ² /minute (max.) | Test: MSMT 322 |
| Filtration Efficiency | 75% (min.) | Test: MSMT 322 |
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

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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] 8-22-02
 G. NELSON CLARK DATE

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).
- 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.
- Following initial soil disturbance or disturbance, permanent or temporary stabilization shall be completed within:
 - 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1
 - 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 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec. 6). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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:	2.865 Acres
Area Disturbed:	2.865 Acres
Area to be roofed or paved:	1.146 Acres
Area to be vegetatively stabilized:	1.719 Acres
Total Cut:	4.870 CY
Total Fill:	0.480 CY
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.
- 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 = 2270 LF
- The total amount of super silt fence = 2270 LF
- The total amount of super diversion fence = 2270 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.

TEMPORARY SEEDING NOTES

- SEEDING PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.
- SOL 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 (07 lbs./1000 sq.ft.). For the period November 1 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. Another 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 COVERED.

CONSTRUCTION SEQUENCE:

	NO. OF DAYS
1. Obtain grading permit.	7
2. Install tree protection fence.	7
3. Install sediment and erosion control devices and stabilize.	14
4. Excavate for foundations, rough grade and temporarily stabilize.	60
5. Construct structures, sidewalks and driveways.	360
6. Final grade, install Erosion Control Matting and stabilize in accordance with standards and specifications.	14
7. Upon approval of the sediment control inspector, remove sediment and erosion control devices and stabilize.	7

* Delay construction of houses on lots: N/A

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

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

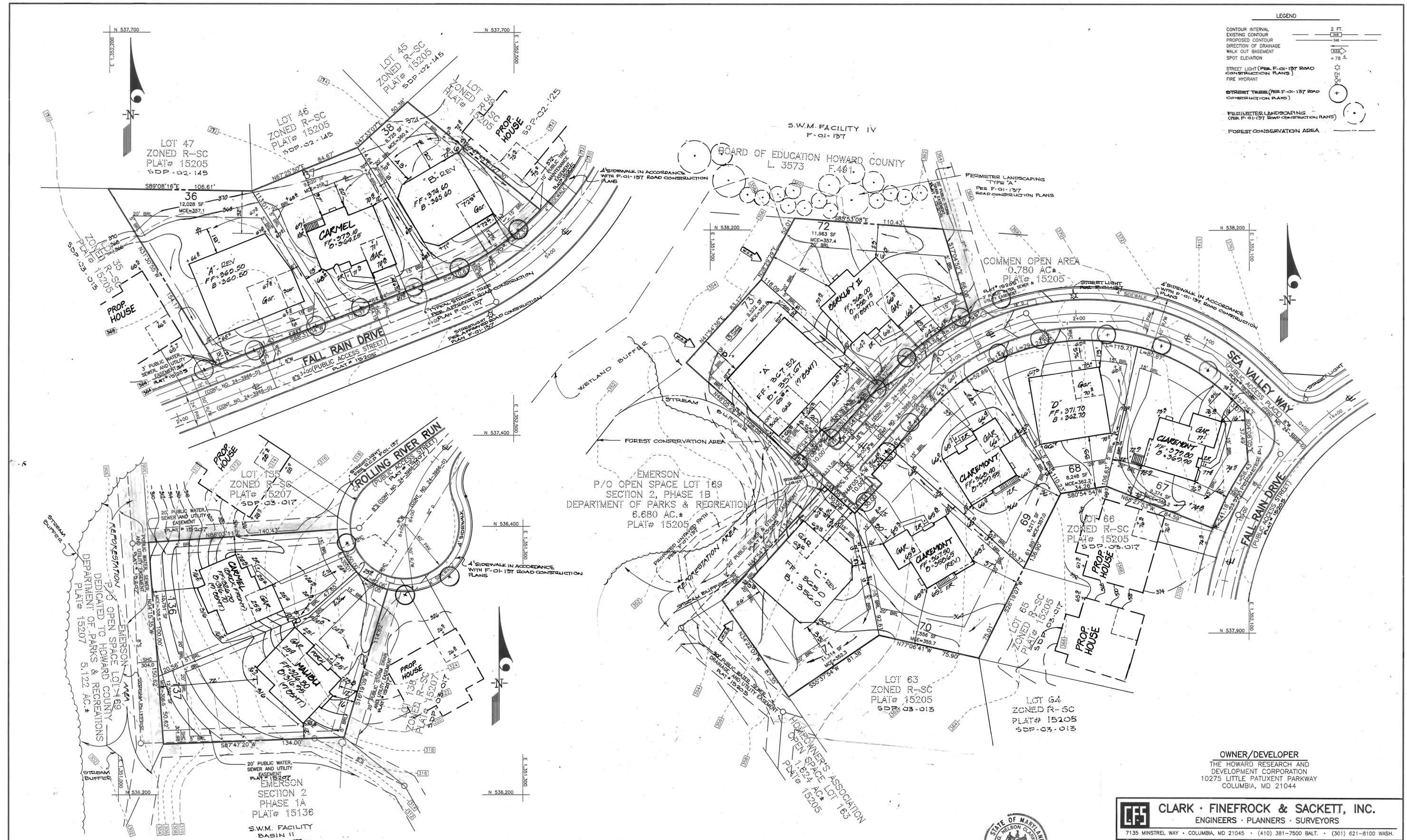
7135 MINTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED DAB/KQL	SEDIMENT AND EROSION CONTROL DETAILS LOTS 36-38, 67-73, 136, & 137	SCALE AS SHOWN
DRAWN CRH2	(SINGLE FAMILY LOTS) EMERSON SECTION 2, PHASE 1B	DRAWING 4 OF 4
CHECKED KQL	TAX MAP 47 PARCEL 3 & 837 BLOCK 8 SIXTH (6TH) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 02-076
DATE 10-25-02	FOR: ALLAN HOMES, INC. 10360 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21076	FILE NO. 02-076-X

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LEGEND

- CONTOUR INTERVAL 2 FT.
- EXISTING CONTOUR
- PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- WALK OUT BASEMENT
- SPOT ELEVATION
- STREET LIGHT (PER F-01-137 ROAD CONSTRUCTION PLANS)
- FIRE HYDRANT
- STREET TREE (PER F-01-137 ROAD CONSTRUCTION PLANS)
- PERIMETER LANDSCAPING (PER F-01-137 ROAD CONSTRUCTION PLANS)
- FOREST CONSERVATION AREA



APPROVED: DEPARTMENT OF PLANNING & ZONING
Chief Engineer
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
Chief of Land Development
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/14/03
 DATE: 3/7/03
 DATE: 3/13/02
 DIRECTOR

NO.	REVISION	DATE
1	REV. LINE 1 AND LOT 37 FROM 'C' BOX TO CARMEL TO SHOW AS-BUILT	4-2-04
2	REV. LINE 1 AND LOT 67 FROM 'D' BOX TO CLAREMONT	11-17-03
3	REV. HOE 1 AND LOT 72 FROM CARMEL TO BERKLEY II	11-26-03
4	REV. HOE 1 TO REHOUND REAR BULL 1 AND 2, EXIT	10-03-03
5	REV. HOE 1 AND LOT 136 FROM 'C' BOX TO CARMEL (9' CONT.)	
6	REV. HOE 1 AND LOT 137 FROM 'D' BOX TO MAJOLI (9' CONT.)	
7	REV. HOE 1 AND LOT 72 FROM 'A' BOX TO CARMEL (REV.)	9-23-03
8	REV. HOE 1 AND LOT 60 FROM 'D' BOX TO CLAREMONT	
9	REV. HOE 1 AND LOT 70 FROM 'D' BOX TO CLAREMONT (REV.)	
10	REVISION	DATE



CLARK · FINEFROCK & SACKETT, INC.
 ENGINEERS · PLANNERS · SURVEYORS
 7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500 BALT. · (301) 621-8100 WASH.

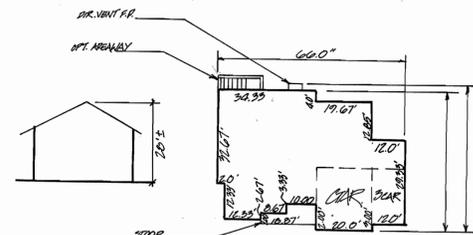
DESIGNED RMT / KQL	SITE DEVELOPMENT PLAN LOTS 36-38, 67-73, 136 & 137	SCALE 1" = 30'
DRAWN JPH / KQL	EMERSON (SINGLE FAMILY UNITS)	DRAWING 2 OF 4
CHECKED KQL	TAX MAP 47 PART OF PARCEL 3 & 337 BLOCK 8 SECTION 2 PHASE 1B SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 02-076
DATE 10-25-02	FOR: ALLAN HOMES, INC. 10260 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21076 (410) 381-1414	FILE NO. 02-076-X

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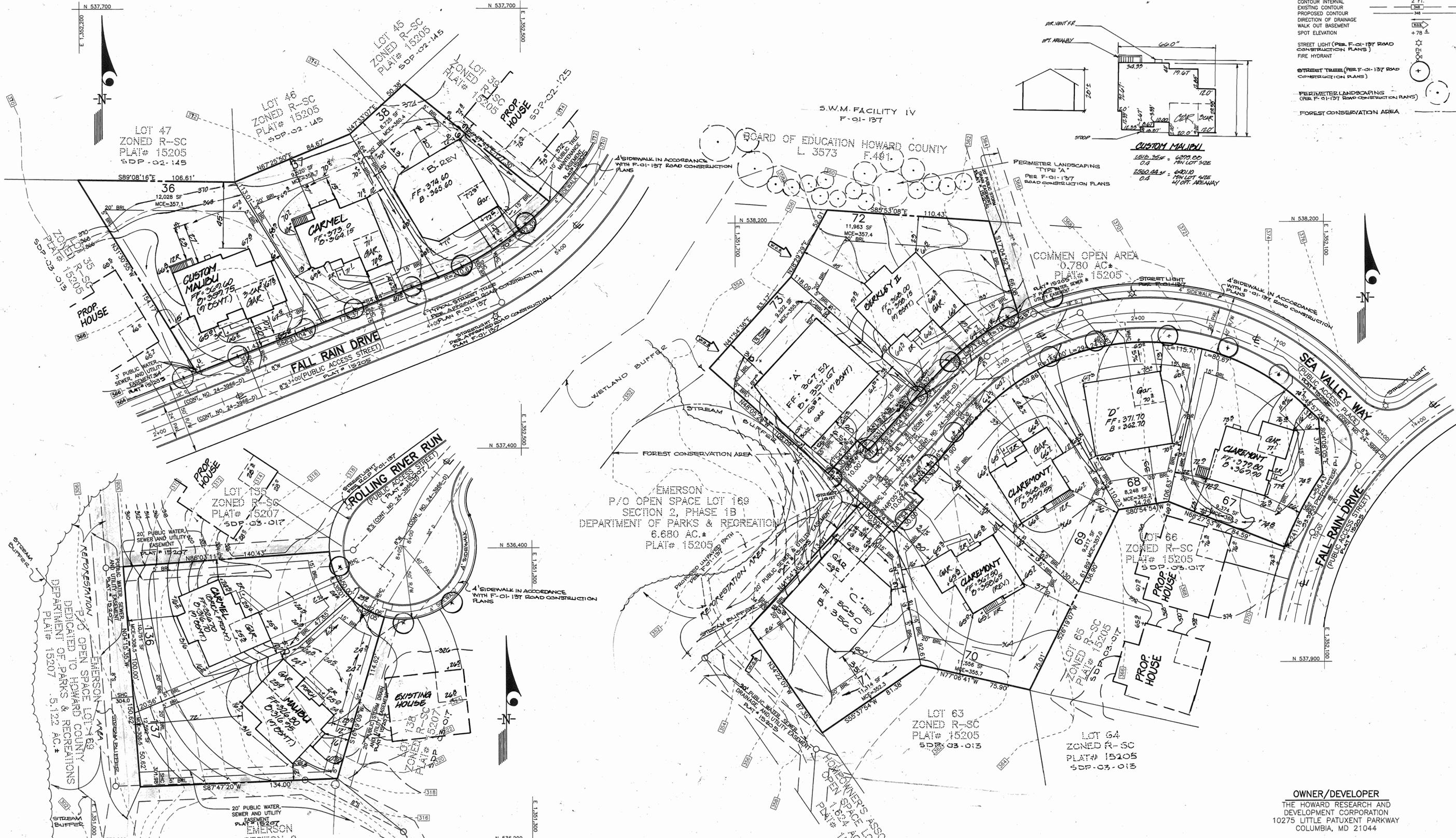
SDP-03-029

LEGEND

- CONTOUR INTERVAL 2 FT.
- EXISTING CONTOUR 34
- PROPOSED CONTOUR 34
- DIRECTION OF DRAINAGE
- WALK OUT BASEMENT
- SPOT ELEVATION +78.5
- STREET LIGHT (PER F-01-137 ROAD CONSTRUCTION PLANS)
- FIRE HYDRANT
- STREET TREE (PER F-01-137 ROAD CONSTRUCTION PLANS)
- PERIMETER LANDSCAPING (PER F-01-137 ROAD CONSTRUCTION PLANS)
- FOREST CONSERVATION AREA



CUSTOM MALIBU
 1512.35 SF
 0.0
 1512.35 SF
 0.0



EMERSON
 P/O OPEN SPACE LOT 169
 SECTION 2, PHASE 1B
 DEPARTMENT OF PARKS & RECREATION
 6.680 AC.
 PLAT# 15205

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

CLARK · FINEPROCK & SACKETT, INC.
 ENGINEERS · PLANNERS · SURVEYORS
 7135 MINSTREL WAY · COLUMBIA, MD 21045 · (410) 381-7500 BALT. · (301) 621-8100 WASH.

DESIGNED RMT / KQL	SITE DEVELOPMENT PLAN LOTS 36-38, 67-73, 136 & 137	SCALE 1" = 30'
DRAWN JPH / KQL	EMERSON (SINGLE FAMILY UNITS)	DRAWING 2 OF 4
CHECKED KQL	TAX MAP 47 PART OF PARCEL 3 & 837 BLOCK B SECTION 2 PHASE 1B SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 02-076
DATE 10-25-02	FOR: ALLAN HOMES, INC. 10260 OLD COLUMBIA ROAD COLUMBIA, MARYLAND 21076 (410) 381-1414	FILE NO. 02-076-X



NO.	REVISION	DATE
1	REV. LOT 137 & 138 TO SHOW AS-BUILT CONDITIONS	7-9-02
2	REV. HSE. GRID LOT 37 TO SHOW AS-BUILT CONDITIONS	8-24-04
3	REV. HSE. GRID LOT 36 FROM 'A' BOX TO CURRY MEADOW	8-24-04
4	REV. HSE. GRID LOT 67 FROM 'C' BOX TO CARMEL TO SHOW AS-BUILT	8-24-04
5	REV. HSE. GRID LOT 67 FROM 'D' BOX TO CLAREMONT	11-18-04
6	REV. HSE. GRID LOT 72 FROM CARMEL TO DERKLEY II	11-26-04
7	REV. HSE. GRID TO REMOVED REAR DIAL & ADD 3' BOX	11-27-04
8	REV. HSE. GRID LOT 136 FROM 'C' BOX TO CARMEL (9' DENT)	
9	REV. HSE. GRID LOT 137 FROM 'D' BOX TO MALIBU (9' DENT)	
10	REV. HSE. GRID LOT 72 FROM 'A' BOX TO CARMEL (REV.)	9-22-05
11	REV. HSE. GRID LOT 67 FROM 'D' BOX TO CLAREMONT	
12	REV. HSE. GRID LOT 70 FROM 'C' BOX TO CLAREMONT (REV.)	

APPROVED: DEPARTMENT OF PLANNING & ZONING

 Andy Hancock
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/13/05