PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug, no heeled-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications.

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence.

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope).

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control layout, etc.

SURETY AMOUNT FOR THIS PLAN IS IN THE AMOUNT OF $13,650.00

1. ~~THE LANDSCAPING SURETY FOR CORNER LOT 14 IS $1,250.00 FOR 4 SHADE TREES AND 5 EVERGREEN TREES.~~ LANDSCAPING SURETY FOR LOTS 15 & 34-36 IS $1,500.00 PER LOT.
   THE LANDSCAPING SURETY FOR LOTS 11-13 IS $1,200.00 PER LOT.
   THE LANDSCAPING SURETY FOR LOT 37 IS $2,100.00 FOR 7 SHADE TREES.
   STREET TREES ARE NOT INCLUDED IN MODIFIED SCHEDULE C LANDSCAPE CALCULATIONS.
2. TYPE 'B' BUFFER OR PERIMETER LANDSCAPE BUFFER WILL BE CREDITED TOWARDS THE LANDSCAPING REQUIREMENTS.
3. LANDSCAPING CAN NOT BE PLANTED IN ANY PUBLIC EASEMENTS.
4. FINAL PLANTING TYPE AND LOCATION IS SUBJECT TO APPROVAL BY THE ARCHITECTUAL COMMITTEE.
5. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTING HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH HOWARD COUNTY LANDSCPAE MANUAL.
6. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING. PLANT MATERIALS, BERMS FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.
7. SIZES OF PLANT MATERIALS MUST CONFORM TO THE REQUIREMENTS OF THE LANDSCAPE MANUAL, CHAPTER IV AND APPENDIX C.

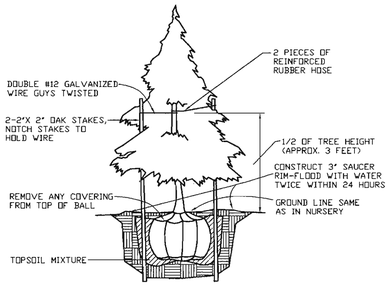
KEY PROPERTY DEVELOPMENT CRITERIA, APPROVED 7/1/99
SECTION VII RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

THE QUANTITY AND GENERAL LOCATION OF TREES REQUIRED FOR INTERNAL LANDSCAPING ARE DETERMINED BY CRITERIA APPLIED BY THE ARCHITECTURAL COMMITTEE. THE COMMITTEE WILL CLASSIFY, DURING ARCHITECTURAL REVIEW, ALL LOTS AND PARCELS AS 1) NON-WOODED; 2) SEMI-WOODED; 3) WOODED. SUCH CLASSIFICATION SHALL TAKE INTO ACCOUNT THE EXISTING TREE COVER AND THE POTENTIAL FOR SAVING TREES IN CONNECTION WITH GRADING AND SITING. THIS CRITERIA ALSO CONSIDER THE SIZE OF THE LOT, AMOUNT OF EXISTING VEGETATION AND THE TYPE AND SITING OF RESIDENTIAL UNITS. IF, DURING OR AFTER CONSTRUCTION, THE COMMITEE DETERMINES THAT A BUILDER HAS VIOLATED ANY PROVISION OF TREE PRESERVATION, THE BUILDER WILL BE REQUIRED TO ADD NEW PLANT MATERIAL. SHADE TREE REQUIREMENTS ARE SPECIFIED BY THE FOLLOWING TABLE. DENSITIES REFER TO THE DENSITY OF THE INDIVIDUAL PARCEL.

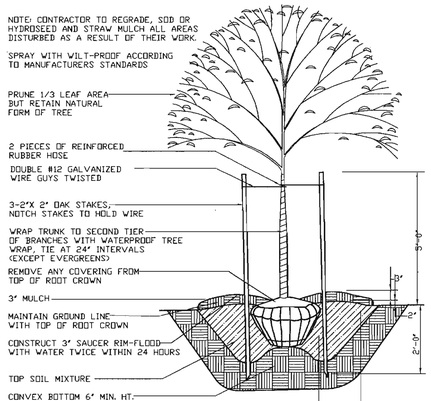
SHADE TREE REQUIREMENTS

TYPE OF UNIT AND LOT SIZE	NON WOODED	SEMI WOODED	WOODED
	MINMUM NUMBER OF SHADE TREES REQUIRED		
SMALL RESIDENTIAL LOT (4,000 - 7,000 SQUARE FEET FOR CLUSTER HOUSE)	4.0/LOT	2.25/LOT	1.25/LOT
MEDIUM RESIDENTIAL LOT (7,000-13,000 SQUARE FEET) 2-4 DU/ACRE	5.0/LOT	3.0/LOT	2.0/LOT
LARGE RESIDENTIAL LOT (13,000 SQUARE FEET-LARGER)	7.0/LOT	4.0/LOT	3.0/LOT

SUBSTITUTION OF TWO FLOWERING TREES OR TWO EVERGREEN TREES FOR EACH SHADE TREE MAY BE PERMITTED FOR UP TO 50% OF THE REQUIRED NUMBER OF SHADE TREES SHOWN IN THE TABLE SUBJECT TO THE APPROVAL OF THE ARCHITECTURAL COMMITTEE. CREDIT MAY ALSO BE GIVEN FOR ANY AREAS REQUIRED TO BE PROVIDED ALONG ROADWAYS, SUBJECT TO THE APPROVAL OF THE ARCHITECTURAL COMMITTEE.



EVERGREEN PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

MODIFIED SCHEDULE C
LANDSCAPE CHART

LOT NO.	LOT CLASSIFICATION	INTERNAL LANDSCAPING REQUIRED (# OF SHADE TREES)	TYPE B REQUIRED		SHADE TREE CREDIT *	REMAINING SHADE TREE OBLIGATION	TOTAL TREES REQUIRED	
			SHADE	EVERGREEN			SHADE	EVERGREEN
LOTS 11,12 & 13	NON-WOODED	4 TREES PER LOT	N/A	N/A	0	0	12	0
LOTS 15, 34,35 & 36	NON-WOODED	5 TREES PER LOT	N/A	N/A	0	0	20	0
LOT 14 CORNER LOT	NON-WOODED	5 TREES PER LOT	4	5	6	0	4	5
LOT 37	NON-WOODED	7 TREES PER LOT	N/A	N/A	0	0	7	0
TOTAL TREES							43	5

* THIS NUMBER REFLECTS THE MATHEMATICAL CONVERSION OF EVERGREEN TREES TO SHADE TREES (2:1) FOR THE PURPOSE OF MEETING THE INTERNAL PER LOT SHADE TREE OBLIGATION.

SCHEDULE A
PERIMETER LANDSCAPE EDGE

LOT NO.	PERIMETER	CATEGORY (PROPERTIES/ ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	NUMBER OF PLANTS REQUIRED		
					SHADE TREES	EVERGREEN TREES	TOTAL TREES
14 CORNER LOT	P-1	ADJACENT TO ROADWAY	B	182'	4	5	7

ADDRESS CHART

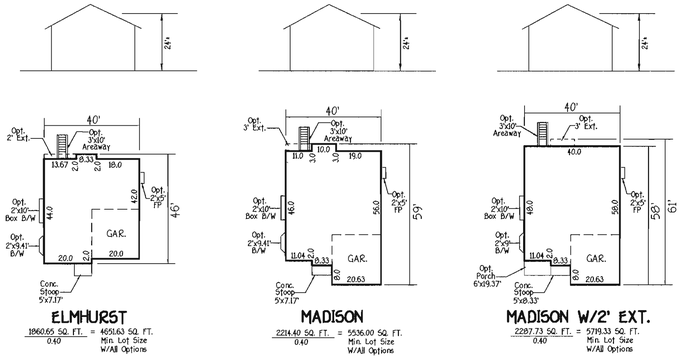
LOT NUMBER	STREET ADDRESS
11	8606 VINTAGE EARTH PATH
12	8608 VINTAGE EARTH PATH
13	8612 VINTAGE EARTH PATH
14	8616 VINTAGE EARTH PATH
15	3608 DAPPER TOWN ROW
34	8506 AUTUMN GRAIN GATE
35	8510 AUTUMN GRAIN GATE
36	8514 AUTUMN GRAIN GATE
37	8518 AUTUMN GRAIN GATE

INDEX CHART

SHEET	DESCRIPTION
SHEET 1	TITLE SHEET, HOUSE TYPES, TEMPLATES
SHEET 2	SITE DEVELOPMENT & SEDIMENT/EROSION CONTROL PLAN, LOTS 11-15
SHEET 3	SITE DEVELOPMENT & SEDIMENT/EROSION CONTROL PLAN LOTS 34-37
SHEET 4	SEDIMENT/EROSION CONTROL NOTES & DETAILS

LEGEND

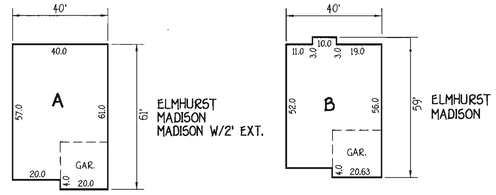
SYMBOL	DESCRIPTION
-------	EXISTING CONTOUR 2' INTERVAL
+362.2	SPOT ELEVATION
—SF—SF—	SILT FENCE
—SSF—SSF—	SUPER SILT FENCE
ECM	EROSION CONTROL MATTING
LOD	LIMIT OF DISTURBANCE
(•)	EXISTING STREET TREE TAKEN FROM F-04-53



ELMHURST
1860.65 SQ. FT. / 0.40 = 4651.63 SQ. FT. Min. Lot Size W/All Options

MADISON
2214.40 SQ. FT. / 0.40 = 5536.00 SQ. FT. Min. Lot Size W/All Options

MADISON W/2' EXT.
2287.73 SQ. FT. / 0.40 = 5719.33 SQ. FT. Min. Lot Size W/All Options

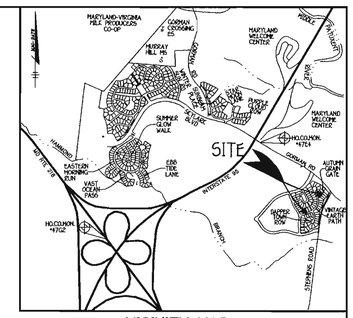


ELMHURST
MADISON
MADISON W/2' EXT.

BENCH MARKS

T.P. 47E4 ELEV. 339.00
N. 535,846.148
E. 1,355,431.224
LOC. NEAR I-95 BRIDGE ALONG GORMAN ROAD

T.P. 47G2 ELEV. 363.53
N. 532,938.964
E. 1,351,224.095
LOC. NEAR MD. RTE 216 WEST NEAR EXIT RAMP TO I-95



VICINITY MAP
SCALE: 1" = 2000'

GENERAL NOTES

1. SUBJECT PROPERTY ZONED PEC-MXD-3 & RSC-MXD-3 AS GRANTED BY THE ZONING BOARD ON 9/3/98 AS CASE NO. ZB-979M.
2. TOTAL AREA OF SITE: 1658 ACRES
3. TOTAL NUMBER OF LOTS SUBMITTED: 9 SFD
4. THE CONTRACTOR OR DEVELOPER SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 24-HOURS PRIOR TO THE COMMENCEMENT OF WORK.
5. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
6. THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES: ZB-979M, WP 99-96, S 99-12, PB-339, F-02-15, F-04-53, WP-03-098, WAS CONT. #24-4120-D.
7. THIS PLAN IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JUNE, 1999 BY DAFT McCUNE WALKER, INC.
8. HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.
   HOWARD COUNTY MONUMENT 47E4 N 535846.148 E 1355431.224
   HOWARD COUNTY MONUMENT 47G2 N 532938.964 E 1351224.095
9. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
10. THIS PLAN IS FOR HOUSE SITING AND GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAY OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION. FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F-04-053. AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 24-4120-D.
11. CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
12. STORMWATER MANAGEMENT WILL BE PROVIDED AS APPROVED ON THE ROAD CONSTRUCTION DRAWINGS FILED UNDER F-04-053. THE FACILITY WILL BE A WET, EXTENDED DETENTION POND AND WILL BE OWNED BY THE PROPERTY OWNERS ASSOCIATION, BUT MAINTAINED BY HOWARD COUNTY.
13. INTERNAL LOT LANDSCAPING REQUIREMENTS SHALL BE PROVIDED IN ACCORDANCE WITH THE DEVELOPMENT CRITERIA APPROVED BY THE PLANNING BOARD PER PB CASE NO. 339 AND SECTION 124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. IN ADDITION TO THE INTERNAL LOT LANDSCAPING, CORNER LOTS SHALL PROVIDE A "TYPE B" PERIMETER LANDSCAPE BUFFER.
14. PERIMETER LANDSCAPING AND STREET TREES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL AND DEVELOPMENT CRITERIA APPROVED BY THE PLANNING BOARD 7-1-99 PER CASE NO. PB-339 AS SHOWN ON THE APPROVED ROAD CONSTRUCTION DRAWINGS FILED UNDER F-04-053.
15. FOREST CONSERVATION REQUIREMENTS HAVE BEEN ADDRESSED WITH F-04-053. PER SECITON 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY WAY OF REFORESTATION PROPOSED UNDER THE EMERSON PHASE 2 SECTION 5A PHASING. A SURETY FOR AFFORESTATION WILL BE THE RESPONSIBILITY OF THE DEVELOPER.
16. FOR DRIVEWAY ENTRANCE DETAILS REFER TO HO. CODES MANUAL VOL. IV DETAILS R.6.03 & R.6.05.
17. OPEN SPACE REQUIREMENTS FOR THESE LOTS HAVE BEEN PROVIDED UNDER F-04-053. THE POA OPEN SPACE HEREON AS LOTS 93 AND 95 AND THE POA/COMMON OPEN AREA SHOWN HEREON AS LOT 94 ARE HEREBY DEDICATED TO A PROPERTY ASSOCIATION FOR THE RESIDENTS OF THIS SUBDIVISION. THE ARTICLES OF INCORPORATION HAVE BEEN FILED WITH THE STATE DEPARTMENT OF ASSESSMENT AND TAXATION WITH INCORPORATION NO. D06439459. THE COVENANTS OF THE EMERSON COMMUNITY ASSOCIATION, INC., WERE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MARYLAND, IN LIBER 5728, FOLIO 464.
18. MINIMUM BUILDING RESTRICTION SETBACKS FROM PROPERTY LINES AND PUBLIC ROAD RIGHTS-OF-WAY 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.
19. THE MINIMUM SETBACKS FOR STRUCTURES SHALL BE AS FOLLOWS
    FRONT SETBACK 15' FROM THE RIGHT-OF-WAY TO THE HOUSE OR GARAGE.
    SIDE SETBACK 5' TO THE PROPERTY LINE WITH A MINIMUM OF 15' BETWEEN STRUCTURES
    REAR SETBACK 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.
20. LOT COVERAGE BY BUILDINGS WITHIN 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 STRUCTURE.
21. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS AS AMENDED UNDER COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT.
22. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY 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 SETBACKS. THE 15' MINIMUM DISTANCE BETWEEN STRUCTURES DOES NOT APPLY TO THOSE 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.
23. 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
    A.) WIDTH - 12' (14' IF SERVING MORE THAN ONE RESIDENCE)
    B.) SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.)
    C.) GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45 FOOT TURNING RADIUS.
    D.) STRUCTURES - (BRIDGES/CULVERTS) CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING)
    E.) DRAINAGE ELEMENTS CAPABLE OF SAFETY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
    F.) STRUCTURE CLEARANCES - MINIMUM 12 FEET
    G.) MAINTENANCE SUFFICIENT TO INSURE ALL WEATHER USE.
24. CHECK SEWER HOUSE CONNECTION ELEVATIONS AT THE PROPERTY LINE PRIOR TO CONSTRUCTION FOR LOTS 36 AND 37.

BUILDER/DEVELOPER'S/ CERTIFICATE

I/WE CERTIFY THAT THE REQUIRED LANDSCAPING WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE 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.

Ted Wies — 10-18-04
TED WIES — DATE

ENGINEER'S CERTIFICATE

"I 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."

Earl D. Collins — 10.17.04
Signature of Engineer — EARL D. COLLINS — Date

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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."

Ted Wies — 10-18-04
Signature of Developer — TED WIES — Date

STATE OF MARYLAND — EARL D. COLLINS — 9753 — PROFESSIONAL ENGINEER

Reviewed for HOWARD SCD and meets Technical Requirements.

Jim Myers — 11/4/04
U.S.D.A.-Natural Resources Conservation Service — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson — 11/4/04
Howard SCD — Date

OWNER

THE HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

BUILDER/DEVELOPER

COLUMBIA BUILDERS
P.O. BOX 999
COLUMBIA, MARYLAND 21044
410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 11/3/04
Chief, Development Engineering Division — Date 11/8/04
Director - Department of Planning and Zoning — Date 11/16/04

PROJECT	SECTION	LOTS NO.
EMERSON	SECTION 2 PHASE 5A	11-15 & 34-37

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
16992-16997	9 & 15	PEC-MXD-3 RSC-MXD-3	47	SIXTH	6069.02

WATER CODE	SEWER CODE
E-15	7640000

NO.	REVISION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

TITLE SHEET

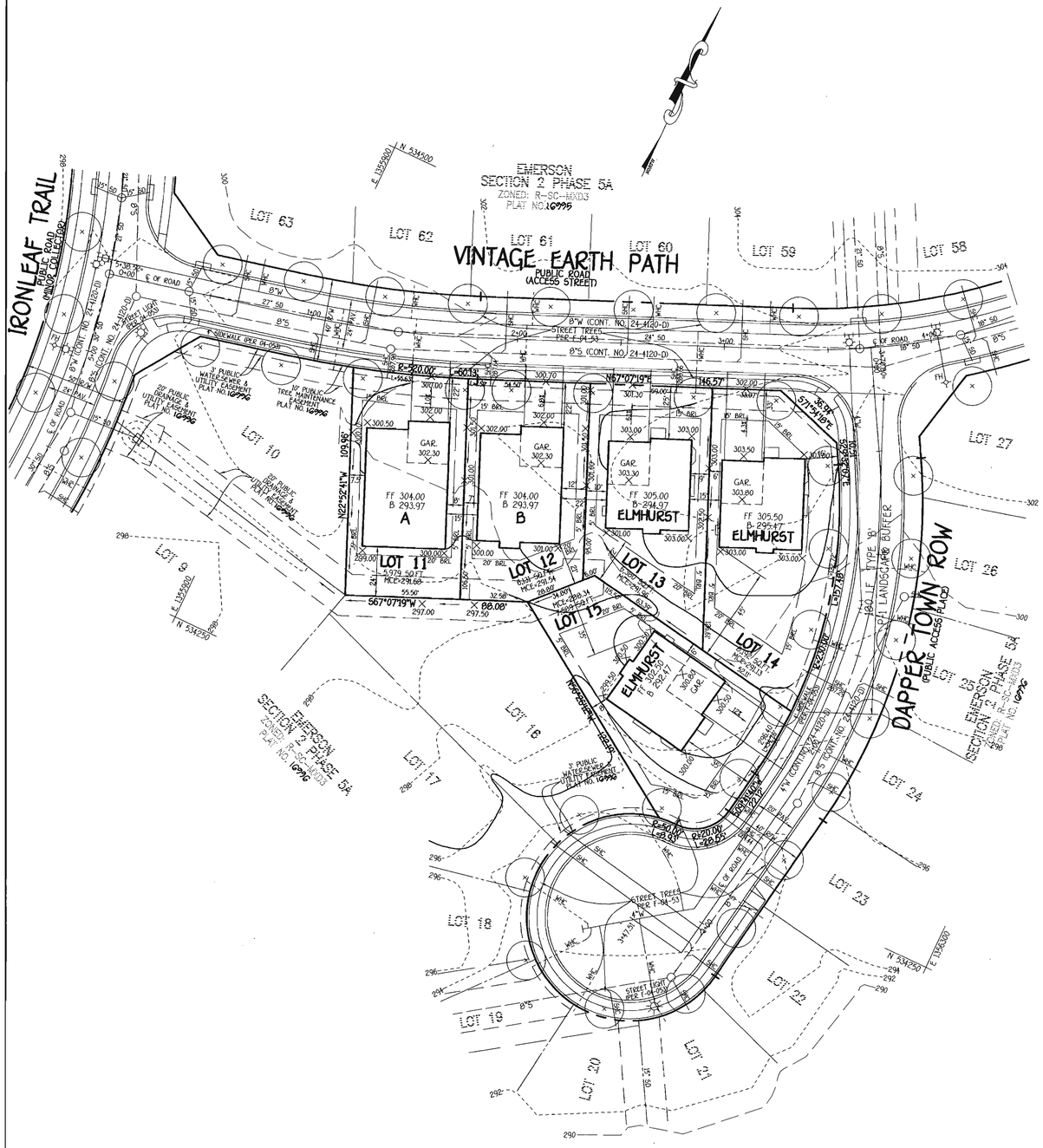
SINGLE FAMILY DETACHED

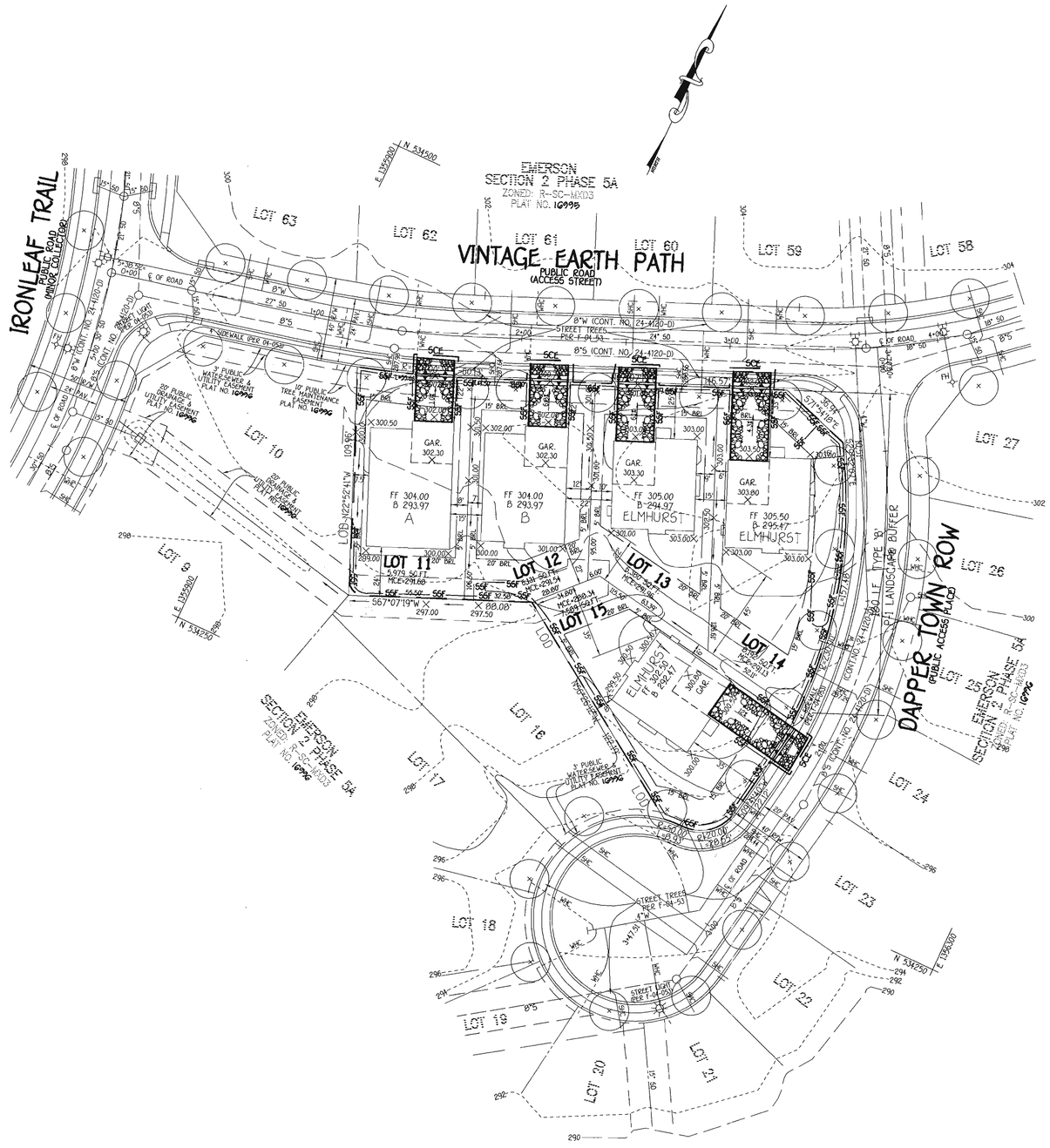
EMERSON
SECTION 2 PHASE 5A
LOTS 11-15 & 34-37

TAX MAP NO: 47 PARCEL NO.: 837 GRID NO.: 9 & 15
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"= 30' DATE: AUGUST, 2004
SHEET 1 OF 4

SDP 05-020

J:\50001 Emerson Property\dwg\Sec2Phase5A\0402-6001 Cover Lots 11-15 & 34-37.dwg, 10/15/2004 11:39:50 AM





FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND
EARL D. COLLINS
No. 9753
PROFESSIONAL ENGINEER

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — EARL D. COLLINS — Date 10.17.04

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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."

Signature of Developer — TED WIES — Date 10-18-04

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service — Date 11/4/04

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 11/4/04

OWNER
THE HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

BUILDER/DEVELOPER
COLUMBIA BUILDERS
P.O. BOX 999
COLUMBIA, MARYLAND 21044
410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 11/8/04

Chief, Development Engineering Division — Date 11/8/04

Director - Department of Planning and Zoning — Date 11/22/04

PROJECT	SECTION	LOTS NO.
EMERSON	SECTION 2 PHASE 5A	11-15 & 34-37

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
16992-16997	9 & 15	PEC-MXD-3 RSC-MXD-3	47	SIXTH	6069.02

WATER CODE	SEWER CODE
E-15	7640000

SITE DEVELOPMENT & SEDIMENT/EROSION CONTROL PLAN

SINGLE FAMILY DETACHED

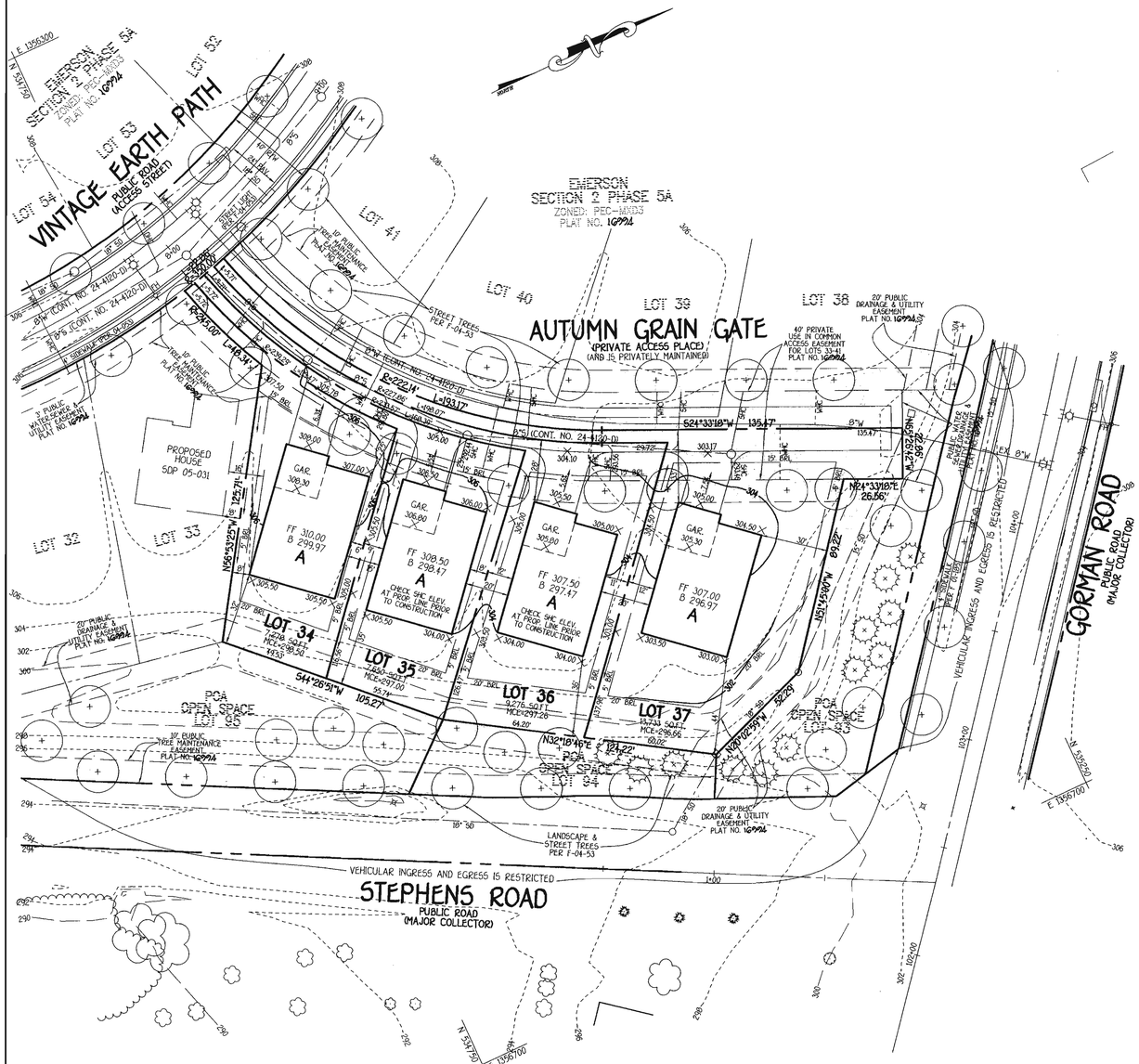
EMERSON

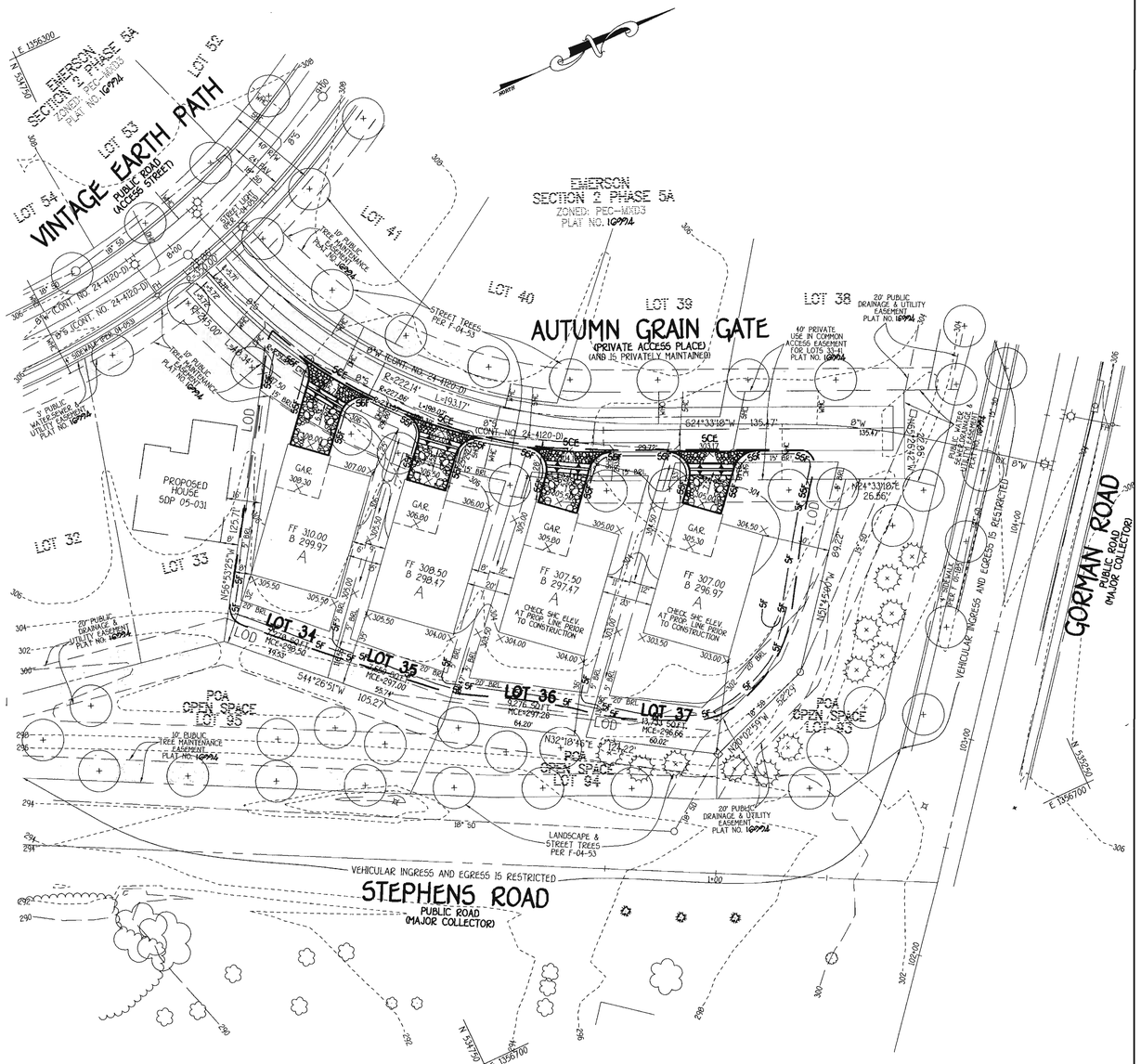
SECTION 2 PHASE 5A
LOTS 11-15 & 34-37

TAX MAP No: 47 PARCEL NO.: 837 GRID 9 & 15
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"= 30' DATE: AUGUST, 2004
SHEET 2 OF 4

SDP 05-020

J:\50001 Emerson Property\dwg\Sec2Phase5A\04092-6001 Sdp Lots 11-15.dwg, 10/15/2004 11:52:06 AM





J:\50001 Emerson Property\dwg\Sec2Phase5A\04092-8001 Sdp Lots 34-37.dwg, 10/15/2004 11:53:03 AM

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND
EARL D. COLLINS
PROFESSIONAL ENGINEER

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — EARL D. COLLINS — Date: 10-17-04

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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."

Signature of Developer — TED WIES — Date: 10-18-04

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service — Date: 11/4/04

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date: 11/4/04

OWNER
THE HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

BUILDER/DEVELOPER
COLUMBIA BUILDERS
P.O. BOX 999
COLUMBIA, MARYLAND 21044
410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date: 11/8/04

Chief, Development Engineering Division — Date: 11/8/04

Director - Department of Planning and Zoning — Date: 11/12/04

PROJECT	SECTION	LOTS NO.
EMERSON	SECTION 2 PHASE 5A	11-15 & 34-37

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
16992 - 16997	9 & 15	PEC-MXD-3 RSC-MXD-3	47	SIXTH	6069.02

WATER CODE	SEWER CODE
E-15	7640000

SITE DEVELOPMENT & SEDIMENT/EROSION CONTROL PLAN

SINGLE FAMILY DETACHED

EMERSON

SECTION 2 PHASE 5A
LOTS 11-15 & 34-37

TAX MAP No: 47 PARCEL NO.: 837 GRID 9 & 15
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"= 30' DATE: AUGUST, 2004
SHEET 3 OF 4

SDP 05-020

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.
Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.
Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation
   i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
   ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
   iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
B. Soil Amendments (Fertilizer and Lime Specifications)
   i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
   ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Mixture may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
   iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98-100% will pass through a #50 mesh sieve.
   iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
C. Seedbed Preparation
   i. Temporary Seeding
      a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
      b. Apply fertilizer and lime as prescribed on the plans.
      c. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
   ii. Permanent Seeding
      a. Minimum soil conditions required for permanent vegetative establishment:
         1. Soil pH shall be between 6.0 and 7.0.
         2. Soluble salts shall be less than 500 parts per million (ppm).
         3. The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or sericea lespedeza is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
         4. Soil shall contain 1.5% minimum organic matter by weight.
         5. Soil must contain sufficient pore space to permit adequate root penetration.
         6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
      b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
      c. Apply soil amendments as per soil test or as included on the plans.
      d. Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.
D. Seed Specifications
   i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
   Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
   ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used after than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective.
E. Methods of Seeding
   i. Hydroseeding - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.
      a. If fertilizer is being applied at the time of seeding, the application rates (amounts will not exceed the following: nitrogen maximum of 100 lbs. per acre total of soluble nitrogen. P2O5 (phosphorous) 200 lbs/ac. K20 (potassium) 200 lbs/ac.
      b. Lime - use only ground agricultural limestone, (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
   ii. Dry Seeding - This includes use of conventional drop or broadcast spreaders.
      a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 26b or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
      b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
   iii. Drill or Cultipacker Seeding - Mechanized seeders that apply and cover seed with soil.
      a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
F. Mulch Specifications (in order of preference)
   i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
   ii. Wood Cellulose Fiber Mulch (WCFM)
      a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
      b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      c. WCFM, including dye, shall contain no germination or growth inhibiting factors.
      d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
      f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.
   Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.
   i. If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
   ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
   iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
H. Securing Straw Mulch (Mulch Anchoring) - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard.
   i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
   ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
   iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of ground should be appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 Petrosett, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
   iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.
I. Incremental Stabilization - Cut Slopes
   i. All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
   ii. Construction sequence (Refer to figure 3 below)
      a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
      b. Perform Phase 1 excavation, dress, and stabilize.
      c. Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
      d. Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

   Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.
J. Incremental Stabilization of Embankments - Fill Slopes
   i. Embankments shall be constructed in lifts as prescribed on the plans.
   ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15', or when the grading operation ceases as prescribed in the plans.
   iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convert it down the slope in a non-erosive manner to a sediment trapping device.
   iv. Construction sequence: Refer to figure 4 (below).
      a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in figure 5, unless other methods shown on the plans address this area.
      b. Place Phase 1 embankment, dress and stabilize.
      c. Place Phase 2 embankment, dress and stabilize.
      d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

   Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of and placement of topsoil (if required) grading and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

SEDIMENT CONTROL NOTES

D) 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 MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER 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, CHAPTER 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 50, 500 (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE DURING OPTIMUM RECOMMENDED SEEDING DATES TO ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6) ALL SEDIMENT CONTROLS, STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THESE REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7) SITE ANALYSIS:

TOTAL AREA OF SITE	1.65± ACRES
AREA DISTURBED	1.65± ACRES
AREA TO BE ROOFED OR PAVED	0.53± ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.12± ACRES
TOTAL CUT	3,700± CU.YDS.
TOTAL FILL	506 CU.YDS.
OFFSITE WASTE/BOORROW AREA LOCATION	N/A

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 CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY 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) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Horrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.)
2) Acceptable — Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Horrow or disc into upper inches of soil.

Seeding : For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 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 (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options :

1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
2) Use sod.
3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 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. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.
Maintenance : Inspect all seeded areas and make needed repairs, replacements and reseedings.

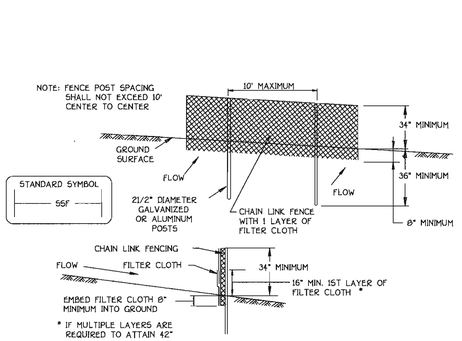
TEMPORARY SEEDING NOTES

Apply to graded or cleared areas 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 : Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.).
Seeding : For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 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. per 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. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 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.

SEQUENCE OF CONSTRUCTION

1.	OBTAIN GRADING PERMIT	7 DAYS
2.	INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN	7 DAYS
3.	CLEAR AND GRUB TO LIMITS OF DISTURBANCE	4 DAYS
4.	INSTALL TEMPORARY SEEDING	2 DAYS
5.	CONSTRUCT BUILDINGS	60 DAYS
6.	FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE	14 DAYS
7.	REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.	7 DAYS



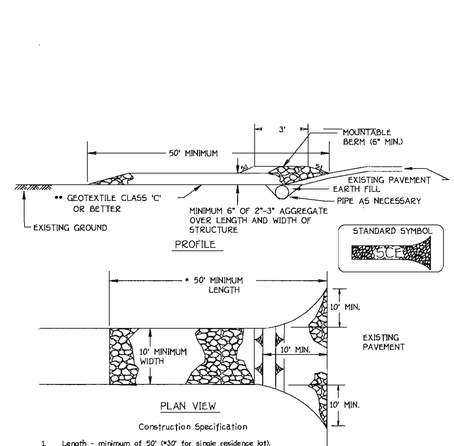
Construction Specifications

1. 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.
2. 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.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height
7. 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	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gal/ft /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet



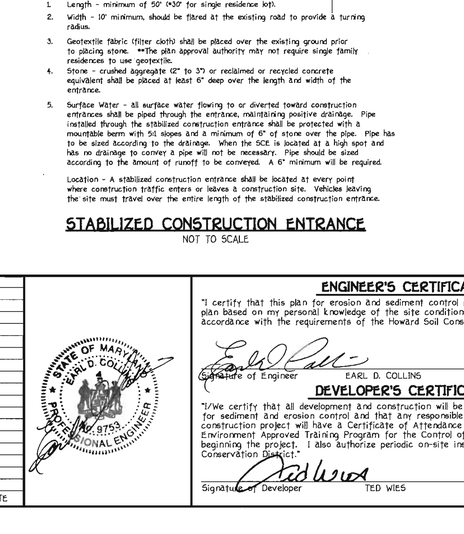
Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. 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 the entrance.
5. 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 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.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



JOINING TWO ADJACENT SILT FENCE SECTIONS

Construction Specifications

1. 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 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
2. 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 / minute (max.)*	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

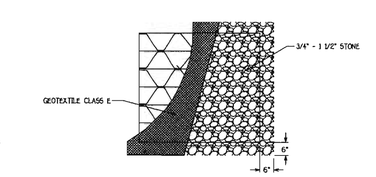
Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general) classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

SILT FENCE

NOT TO SCALE

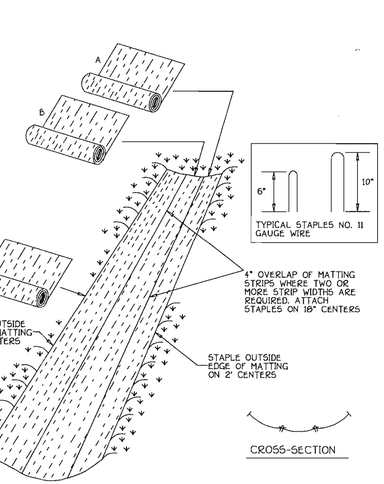


Construction Specifications

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

AT GRADE INLET PROTECTION

NOT TO SCALE



Construction Specifications

1. 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".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. 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", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. 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.

EROSION CONTROL MATTING

NOT TO SCALE

NO.	REVISION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

STATE OF MARYLAND — EARL D. COLLINS — No. 9753 — PROFESSIONAL ENGINEER

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — EARL D. COLLINS — 10-17-04 Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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."

Signature of Developer — TED WIES — 10-18-04 Date

Reviewed for HOWARD SCD and meets Technical Requirements.
U.S.D.A.-Natural Resources Conservation Service — 11/4/04 Date
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Howard SCD — 11/4/04 Date

OWNER
THE HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

BUILDER/DEVELOPER
COLUMBIA BUILDERS
P.O. BOX 999
COLUMBIA, MARYLAND 21044
410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 11/8/04
Chief, Development Engineering Division — Date 11/8/04
Director - Department of Planning and Zoning — Date 11/12/04

PROJECT	SECTION	LOTS NO.
EMERSON	SECTION 2 PHASE 5A	11-15 & 34-37

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
16992 - 16997	9 & 15	PEC-MXD-3 R5C-MXD-3	47	SIXTH	6069.02

WATER CODE	SEWER CODE
E-15	7640000

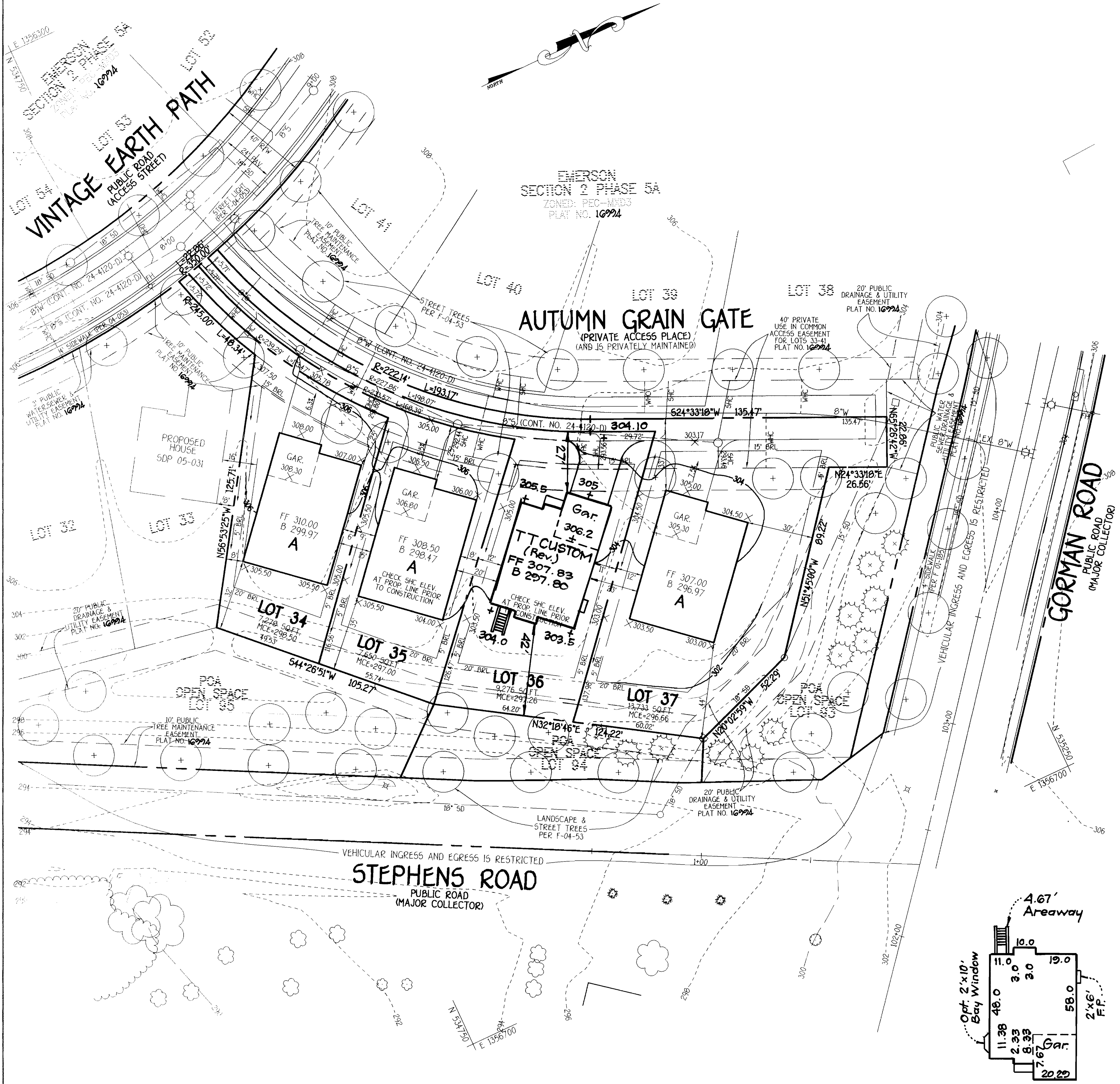
SEDIMENT/EROSION CONTROL NOTES & DETAILS

SINGLE FAMILY DETACHED
EMERSON
SECTION 2 PHASE 5A
LOTS 11-15 & 34-37

TAX MAP NO.: 47 PARCEL NO.: 837 GRID NO.: 9 & 15
SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2004
SHEET 4 OF 4

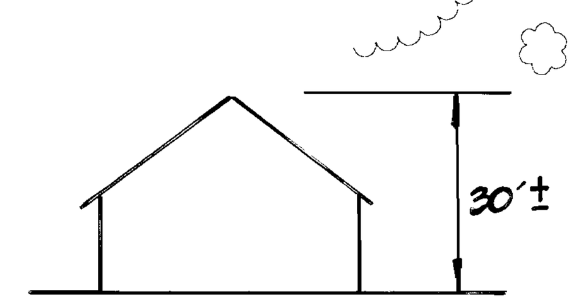
SDP 05-020

J:\50001 Emerson Property\dwg\Sec2Phase5A\10409Z-9001 Details Lots 11-15 & 34-37.dwg, 10/15/2004 11:50:00 AM



TT CUSTOM
LOT 36

$\frac{2172}{0.4}$ = 5,430 SF Min. Lot Size



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE
1	Rev. hse. and grade lot 36	10-21

STATE OF MARYLAND — EARL D. COLLINS

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — EARL D. COLLINS — Date 10.17.04

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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."

Signature of Developer — TED WIES — Date 10-18-04

Reviewed for HOWARD SCD and meets Technical Requirements.
U.S.D.A.-Natural Resources Conservation Service — Date 11/4/04

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Howard SCD — Date 11/4/04

OWNER
THE HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
410-992-6000

BUILDER/DEVELOPER
COLUMBIA BUILDERS
P.O. BOX 949
COLUMBIA, MARYLAND 21044
410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Division of Land Development — Date 11/8/04
Chief, Development Engineering Division MK — Date 11/8/04
Director - Department of Planning and Zoning — Date

PROJECT			SECTION		LOTS NO.
EMERSON			SECTION 2 PHASE 5A		11-15 & 34-37
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
16992-16997	9 & 15	PEC-MXD-3 RSC-MXD-3	47	SIXTH	6069.02
WATER CODE			SEWER CODE		
E-15			7640000		

SITE DEVELOPMENT & SEDIMENT/EROSION CONTROL PLAN

SINGLE FAMILY DETACHED

EMERSON

SECTION 2 PHASE 5A
LOTS 11-15 & 34-37

TAX MAP No: 47 PARCEL NO.: 837 GRID 9 & 15
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"= 30' DATE: AUGUST, 2004

SDP 05-020

J:5000' Emerson Property\dwg\Sec2Phase5A\04092-600' Sdp Lots 34-37.dwg