

1/15/2001 Emerson Project\jdw\61755 Emerson 11.Goodie\61755 Sdp.tbl 34.35.dwg 08/19/2002 09:30:12 AM

<p>FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS 2000 WASHINGTON SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PkE ELLICOTT CITY, MARYLAND 21042 (410) 461-2955</p>	NO.	REVISION	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."

Signature of Engineer: *Charles J. Crovo, Sr.* Date: 9/18/02

DEVELOPER'S CERTIFICATE

"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: *Robert Goodier* Date: 9-19-02

Reviewed for HOWARD SCD and meets Technical Requirements.

Jim M. Gura Date: 10/24/02
 S.D.A.-Natural Resources Conservation Service

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

Jim K. Robertson Date: 10/24/02
 Howard SCD

OWNER	BUILDER/DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044 410-992-6000	GOODIER BUILDERS 10705 CHARTER DRIVE SUITE 1320 COLUMBIA, MARYLAND 21044 410-997-7400

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Andy Kanata Date: 11/6/02
 Chief, Division of Land Development

John Dammann Date: 10/21/02
 Chief, Development Engineering Division MK

John Z. Smith Date: 11/6/02
 Director - Department of Planning and Zoning HC

PROJECT	EMERSON	SECTION	2/1B	LOTS NO.	34, 35, 60-64, 110-112, 117 & 131-133
PLAT	15205	BLOCK NO.	8 & 9	TAX/ZONE	PEC-MXD-3
WATER CODE	E-15	ELEC. DIST.	47	SEWER CODE	7640000
		CENSUS TR.	6		6068.02

SITE DEVELOPMENT & SEDIMENT/EROSION CONTROL PLAN

SINGLE FAMILY DETACHED
EMERSON
 SECTION 2 PHASE 1B
 LOTS 34,35,60-64,110-112,117 & 131-133

TAX MAP No: 47 PARCEL: 3 & 837 GRID 8
 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: JULY, 2002
 SHEET 2 OF 8

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion. Vegetative stabilization specifications are used to describe 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. An improving side effect is the 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 levees, dams, cut and fill slopes and areas of final grade, former stockpiles 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.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

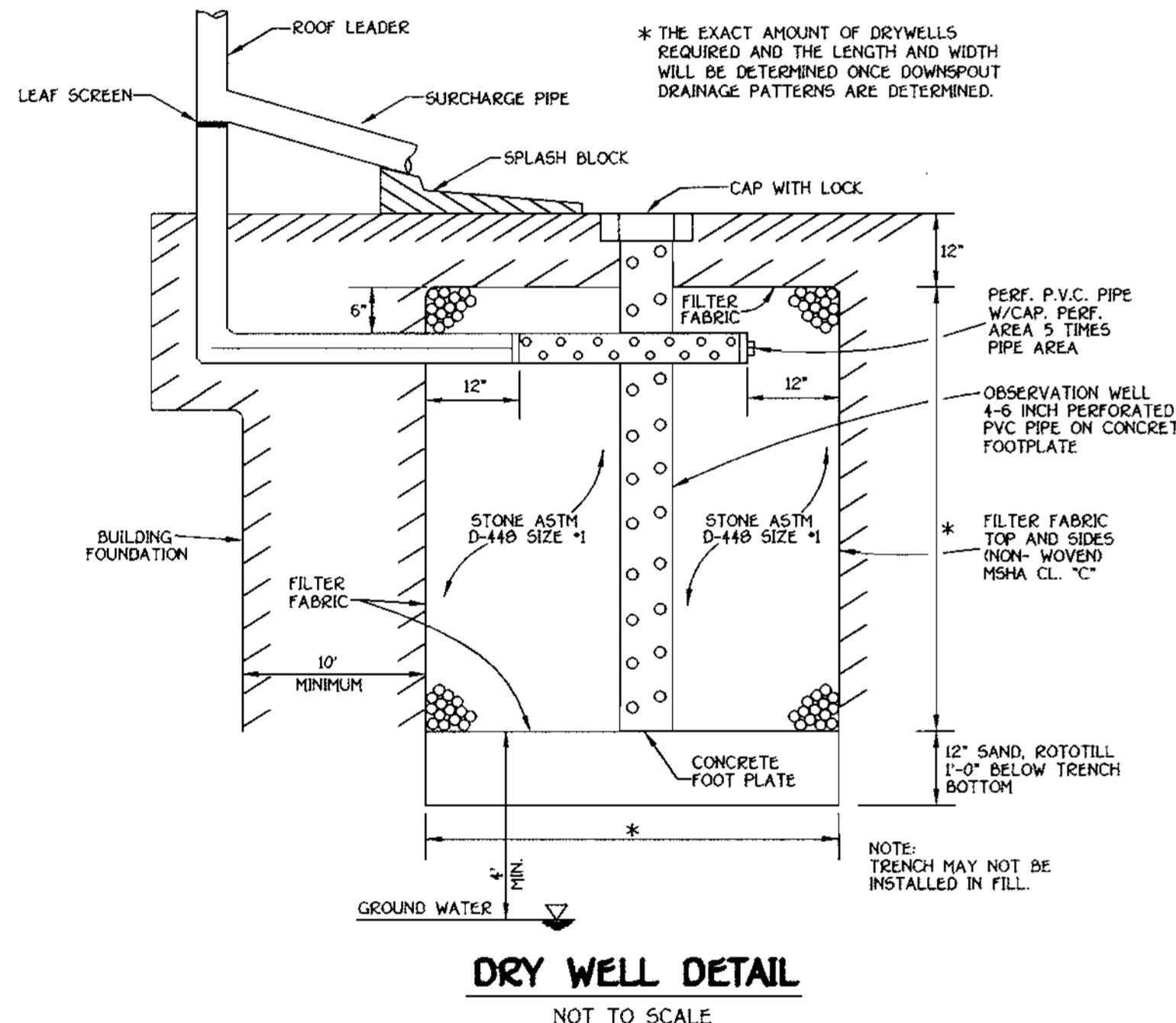
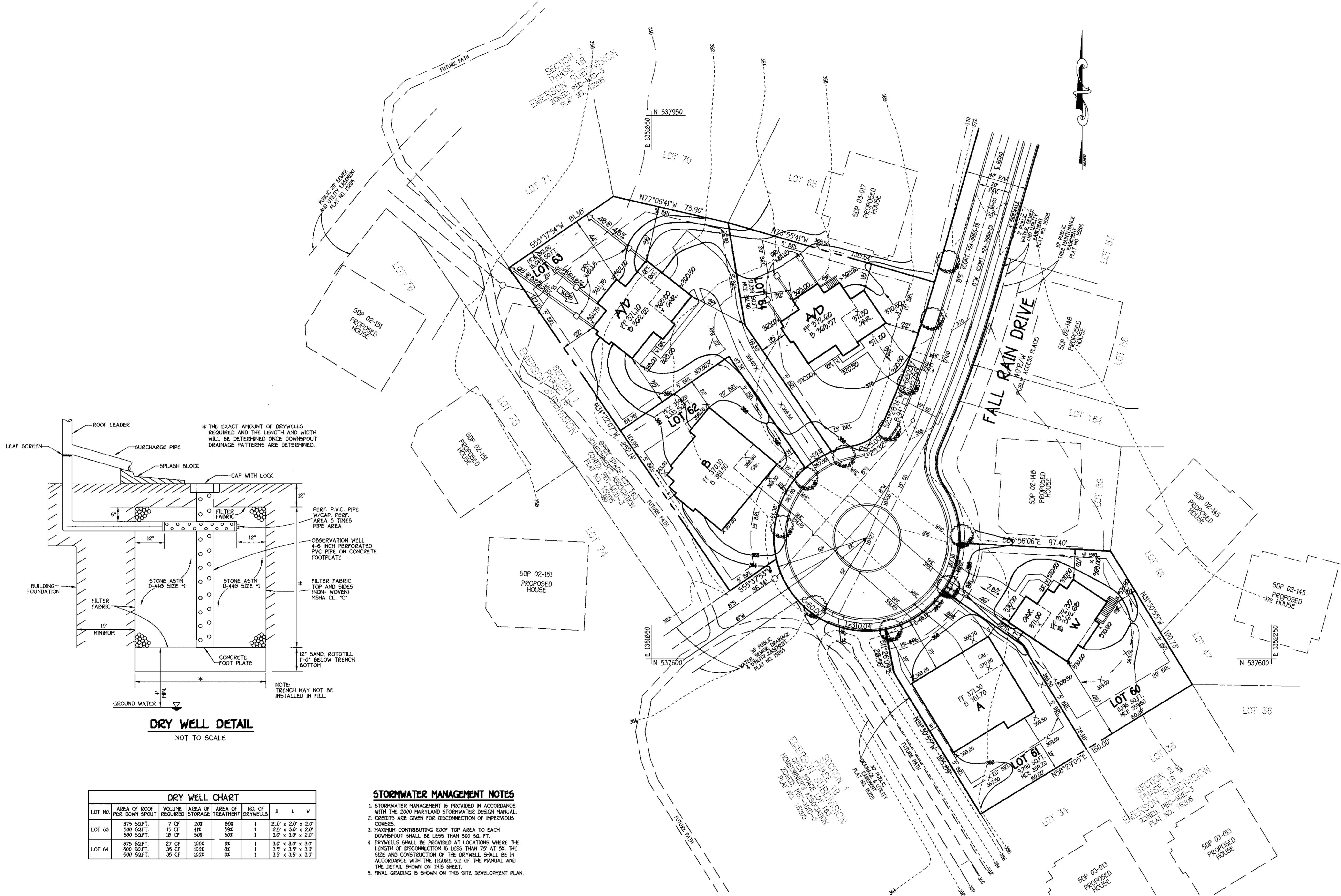
1. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
2. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
3. Schedule rippled soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
4. Soil amendments (fertilizers) (see Specifications)
5. 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 analysis.
6. Fertilizers shall be applied in a free flowing and suitable for accurate application by approved equipment. Fertilizer 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 law and shall bear the name, trade name or trademark and warrant of the producer.
7. Lime 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 #20 mesh sieve and 90-100% will pass through a #40 mesh sieve.
8. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
9. Temporary Seeding
 - i. Seeding preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc hitches 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 larger than 3/8 should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - ii. Apply fertilizer and lime as prescribed on the plans.
 - iii. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
10. Permanent Seeding
 - i. Minimum soil pH required for permanent vegetative establishment:
 - a. Soil pH shall be between 6.0 and 7.0.
 - b. Soluble salts shall be less than 400 parts per million ppm.
 - c. The soil shall contain less than 0.05% calcium chloride (CaCl₂) but enough free calcium material (CaO) will plus CaCl₂ to provide the capacity to hold a moderate amount of moisture. An exception is if lavender or sericea lespedeza is to be planted, then a sandy soil (CaO will plus CaCl₂) would be acceptable.
 - d. Soil shall contain 1.5% organic matter by weight.
 - e. Soil must contain sufficient pore space to permit adequate root penetration.
 - ii. If these conditions cannot be met by soil on site, adding topsoil is required. In accordance with Section 21 Standards and Specifications for Topsoil.
 - iii. Areas to be seeded in conformance with the drawings shall be maintained in a true and even grade, the soil shall be 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.
 - iv. Apply soil amendments as per soil test or as included on the plans.
 - v. 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 seeded 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 3-5" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

11. Seed Specifications
 - i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to testing by a recognized seed authority. All seed shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
 - ii. Seed tags shall be made available to the inspector to verify type and rate of seed used.
 - iii. Incidental - the inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the amount of inoculant for legume seed. Inoculant may be substituted with a commercial product until used. Temperatures above 75-90°F can weaken bacteria and make the inoculant less effective.
12. Methods of seed seeding
 - i. Hydroseeding - Apply seed uniformly with hydroseeder. Slurry includes seed and fertilizer, broadcast spreader. 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. Phosphorus maximum of 20 lbs. per acre total of soluble phosphorus.
 - ii. Lime - use only ground agricultural limestone, 4 to 5 tons per acre may be applied by hydroseeding. Hydroseeding of lime is not recommended. Do not use lime applied at any other time. Do not use burnt or hydrated lime when hydroseeding.
 - iii. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
 - iv. Dry Seeding - This includes the use of conventional drop or broadcast spreaders.
 - a. Seed spread dry shall be incorporated into the soil at the rate prescribed on the Temporary Seeding Summary or Tables 205 or 206. The seeded area shall then be raked with a weighted roller to provide good seed to soil contact.
 - b. When practical, seed shall be applied in two directions perpendicular to each other.
 - v. Drill or Outdragger Seeding - Mechanized seeders that apply and cover seed with soil.
 - a. Outdragger seeders are required to bury the seed to such a depth so that normal rainfall 1/4 inch of soil covering seeded seeds must be firm after planting.
 - b. Where practical, seed should be applied in two directions perpendicular to each other.
 - c. Apply half the seeding rate in each direction.
13. Match 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 moist, moldy, excessively dusty or excessively heavy and shall be free of noxious weed seeds and other objectionable material.
 - ii. Wood Cellulose Fiber Mulch (WCFF)
 - a. WCFF shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - b. WCFF shall be dried green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniform spread slurry.
 - c. WCFF including any additives shall conform to the manufacturer's instructions. Factors WCFF materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in water suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The wood material shall form a water-like ground cover, on application having moisture absorption and retention properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - d. WCFF material shall contain no elements in concentrations or levels that will be phytotoxic.
 - e. WCFF must conform to the following physical requirements: fiber length to approximately 10 mm, diameter approximately 1 mm, pH range of 6.0 to 8.0, ash content of less than 10%.

14. Only sterile straw mulch should be used in areas where one species of grass is desired.

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
 SEEDING PREPARATION:
 1. LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
 SOIL AMENDMENTS:
 1. APPLY TWO TONS PER ACRE (20 TO 90 LBS./1,000 SQ.FT.) OF UNBLENDED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.
 2. APPLY 500 LBS. PER ACRE (5 TO 20 LBS./1,000 SQ.FT.) OF 0-20-20 FERTILIZER OR 100 LBS./1,000 SQ.FT. OF 0-10-10 FERTILIZER.
 3. APPLY 400 LBS. PER ACRE (4 TO 16 LBS./1,000 SQ.FT.) OF 0-10-10 FERTILIZER.
 4. APPLY 500 LBS. PER ACRE (5 TO 20 LBS./1,000 SQ.FT.) OF 0-10-10 FERTILIZER.
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 119. APPLY 500 LBS. PER ACRE (5 TO 20 LBS./1,000 SQ.FT.) OF 0-10-10 FERTILIZER.
 120. APPLY 500 LBS. PER ACRE (5 TO 20 LBS./1,000 SQ.FT.) OF 0-10-10 FERTILIZER.
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 132. APPLY 500 LBS. PER ACRE (5 TO 20 LBS./1,000 SQ.FT.) OF 0-10-10 FERTILIZER.
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 182. APPLY 500 LBS. PER ACRE (5 TO 20 LBS./1,000 SQ.FT.) OF 0-10



DRY WELL CHART							
LOT NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	AREA OF STORAGE	AREA OF TREATMENT	NO. OF DRYWELLS	D	L x W
LOT 63	375 SQ.FT. 900 SQ.FT. 900 SQ.FT.	7 CF 15 CF 18 CF	20X 41X 50X	80X 50X 50X	1 1 1	2.0'	2.0' x 2.0' x 2.0' 2.5' x 3.0' x 2.0' 3.0' x 3.0' x 2.0'
LOT 64	375 SQ.FT. 900 SQ.FT. 900 SQ.FT.	27 CF 35 CF 35 CF	100X 100X 100X	0X 0X 0X	1 1 1	3.0'	3.0' x 3.0' x 3.0' 3.5' x 3.5' x 3.0' 3.5' x 3.5' x 3.0'

- STORMWATER MANAGEMENT NOTES**
1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL.
 2. CREDITS ARE GIVEN FOR DISCONNECTION OF IMPERVIOUS COVERS.
 3. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE LESS THAN 500 SQ. FT.
 4. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE FIGURE 5.2 OF THE MANUAL AND THE DETAIL SHOWN ON THIS SHEET.
 5. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10772 MALTBY NATIONAL PARK
ELLSWORTH CITY, MARYLAND 21042
410.481.2955

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: *Charles J. Crovo, Sr.* Date: *9/1/02*

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: *Robert Goodier* Date: *9-19-02*

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hamat 11/6/02
Chief, Division of Land Development

Michael... 10/21/02
Chief, Development Engineering Division

... 11/8/02
Director, Department of Planning and Zoning

PROJECT: EMERSON SECTION 2 PHASE 1B LOT 60, 61, 62, 63, 64
SECTION: 2/1B
LOTS NO.: 34, 35, 60-64, 110-112, 117 & 131-133

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
15205 15206 15207	8 & 9	PEC-MXD-3	47	6	6068.02

WATER CODE: E-15 SEWER CODE: 7640000

SITE DEVELOPMENT PLAN

SINGLE FAMILY DETACHED

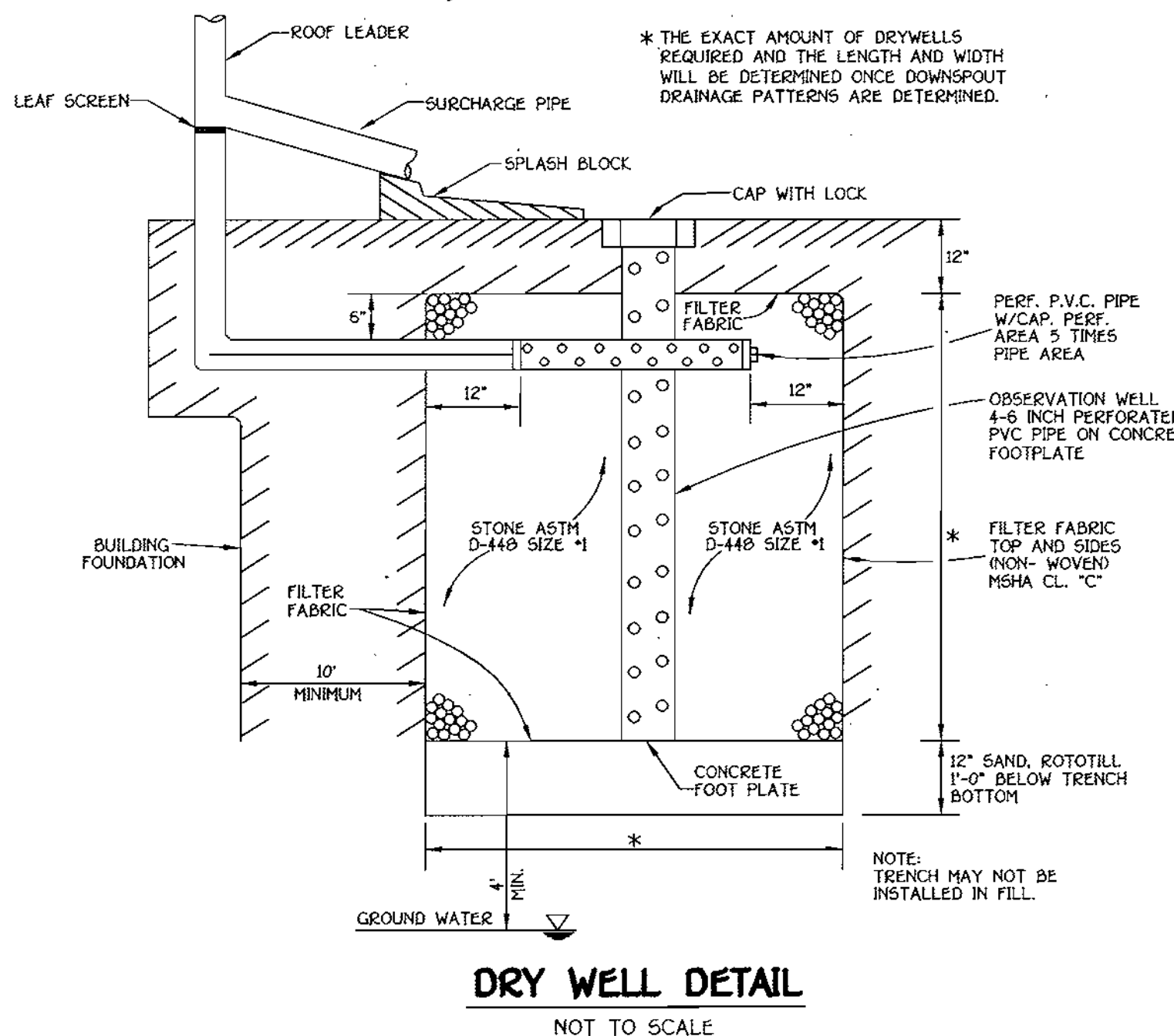
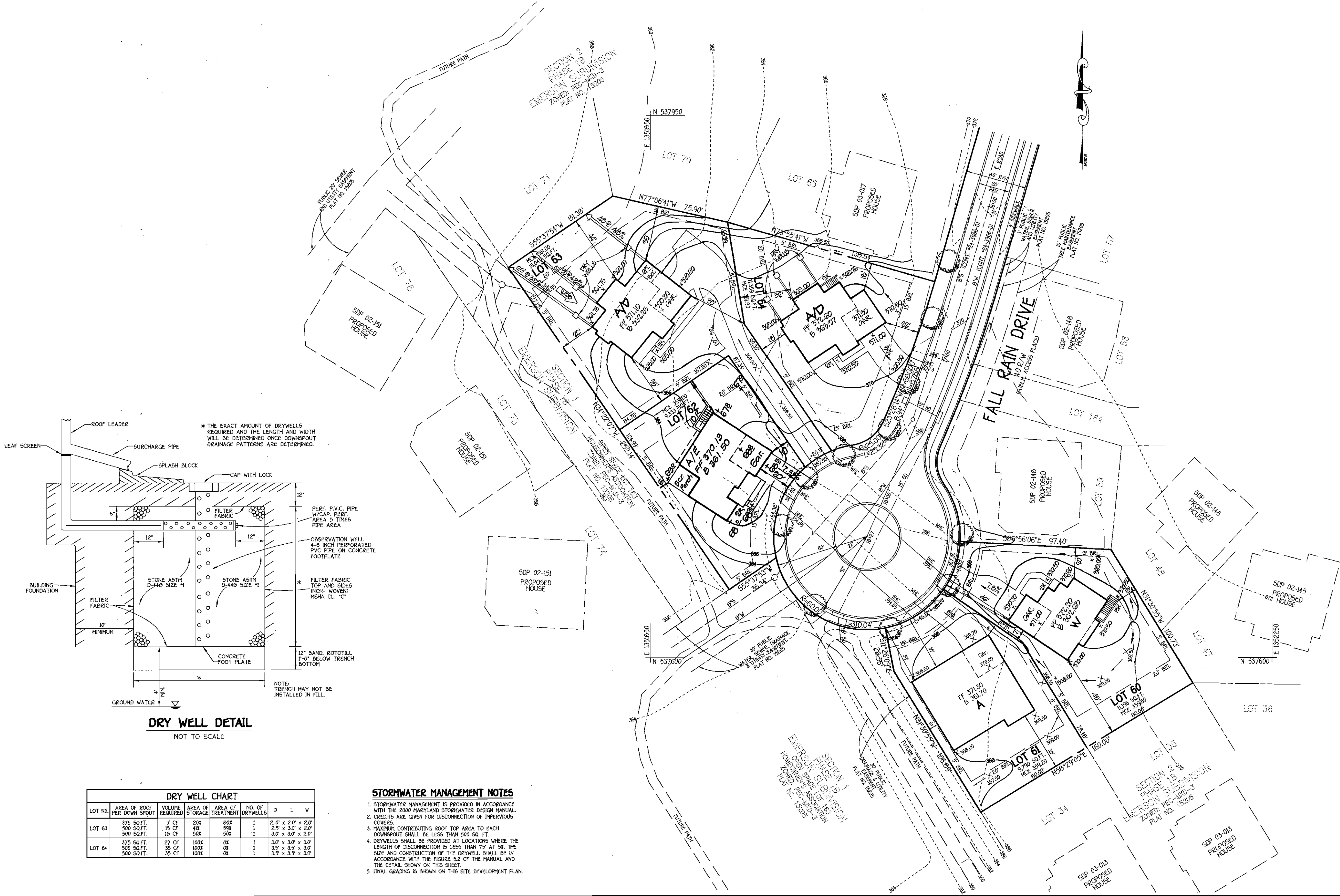
EMERSON

SECTION 2 PHASE 1B

LOTS 34, 35, 60-64, 110-112, 117 & 131-133

TAX MAP No: 47 PARCEL: 3 & 837 GRID B
SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2002
SHEET 3 OF 8

J:\50001 Emerson Project\dwg\1795_Site_Plan.dwg, 08/19/2002 08:31:23 AM



DRY WELL DETAIL
NOT TO SCALE

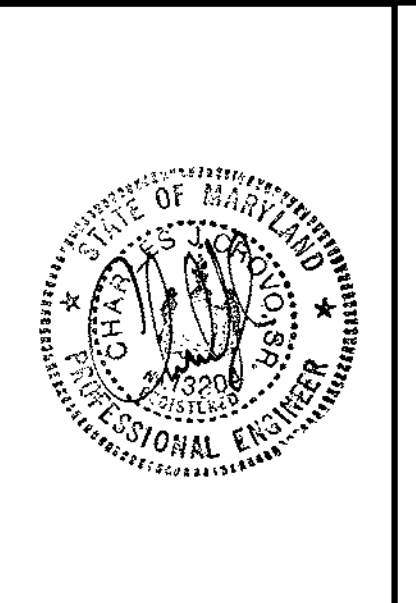
DRY WELL CHART									
LOT NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	AREA OF STORAGE	AREA OF TREATMENT	NO. OF DRYWELLS	D	L	W	
LOT 63	375 SQ.FT. 500 SQ.FT. 500 SQ.FT.	7 CF 15 CF 30 CF	20X 40X 50X	80X 50X 50X	1 1 1	2.0'	2.0'	2.0'	
LOT 64	375 SQ.FT. 500 SQ.FT. 500 SQ.FT.	27 CF 35 CF 35 CF	100X 100X 100X	0X 0X 0X	1 1 1	3.0'	3.0'	3.0'	

STORMWATER MANAGEMENT NOTES

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2. CREDITS ARE GIVEN FOR DISCONNECTION OF IMPERVIOUS COVERS.
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4. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5% SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE FIGURE 5.2 OF THE MANUAL AND THE DETAIL SHOWN ON THIS SHEET.
5. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
BELLGATE CITY, MARYLAND 21112
410.461.2095

NO.	REV.	REVISION	DATE
2	Rev. HSE.		
1	REV. HSE. & GRD. LOTS 60, 63 & 64		3/6/02



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: *Charles J. Crovo, Sr.* Date: 9/11/02
CHARLES J. CROVO, SR.

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: *Robert Goodier* Date: 9-19-02
ROBERT GOODIER

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service
This development plan is approved for sediment and erosion control by the HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* Date: 9/11/02

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

BUILDER/DEVELOPER
GOODIER BUILDERS
10705 CHARTER DRIVE
SUITE #320
COLUMBIA, MARYLAND 21044
410-997-7400

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: *[Signature]* Date: 11/6/02
Chief, Development Engineering Division: *[Signature]* Date: 10/29/02
Director, Department of Planning and Zoning: *[Signature]* Date: 11/8/02

PROJECT	SECTION	LOTS NO.
EMERSON	2/1B	34,35,60-64,110-112, 117 & 131-133
PLAT	BLOCK NO.	ZONE
15205 15206 15207	8 & 9	PEC-MXD-3
TAX/ZONE	ELEC. DIST.	CENSUS TR.
47	6	6068.02
WATER CODE	SEWER CODE	
E-15	7640000	

SITE DEVELOPMENT PLAN

SINGLE FAMILY DETACHED

EMERSON

SECTION 2 PHASE 1B

LOTS 34,35,60-64,110-112,117 & 131-133

TAX MAP No: 47 PARCEL: 3 & 837 GRID B
SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2002
SHEET 3 OF 8

SURETY AMOUNT FOR THIS PLAN IS IN THE AMOUNT OF \$2,000.00
 1. SURETY FOR LOTS 34,35,60-64,110-112,117 & 131-133 \$1,500.00 PER LOT. FIGURED ON A PER LOT BASIS. CREDIT GIVEN FOR LANDSCAPE BUFFER WERE APPLICABLE.
 2. STREET TREES ARE NOT INCLUDED IN MODIFIED SCHEDULE C LANDSCAPE CALCULATIONS.
 3. TYPE "B" BUFFER OR PERIMETER LANDSCAPE BUFFER WILL BE CREDITED TOWARDS THE LANDSCAPE REQUIREMENTS.
 4. LANDSCAPE CAN NOT BE PLANTED IN ANY PUBLIC EASEMENTS.
 5. FINAL PLANTING TYPE AND LOCATION IS SUBJECT TO APPROVAL BY THE ARCHITECTURAL COMMITTEE.
 6. 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 LANDSCAPE MANUAL.
 7. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERRIES 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 OTHERS REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.
 8. 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 D (NON-WOODED), DSEMI-WOODED, S (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 SETTING OF RESIDENTIAL UNITS. IF, DURING OR AFTER CONSTRUCTION, THE COMMITTEE 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	MINIMUM NUMBER OF SHADE TREES REQUIRED		
	NON WOODED	SEMI WOODED	WOODED
MEDIUM RESIDENTIAL LOT (7,000-13,000 SQUARE FEET) 2-4 D.U./ACRE	5.0/Lot	3.0/Lot	2.0/Lot

SUBSTITUTION OF TWO FLOWERING TREES OR TWO EVERGREEN TREES FOR EACH SHADE TREE MAY BE PERMITTED 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.

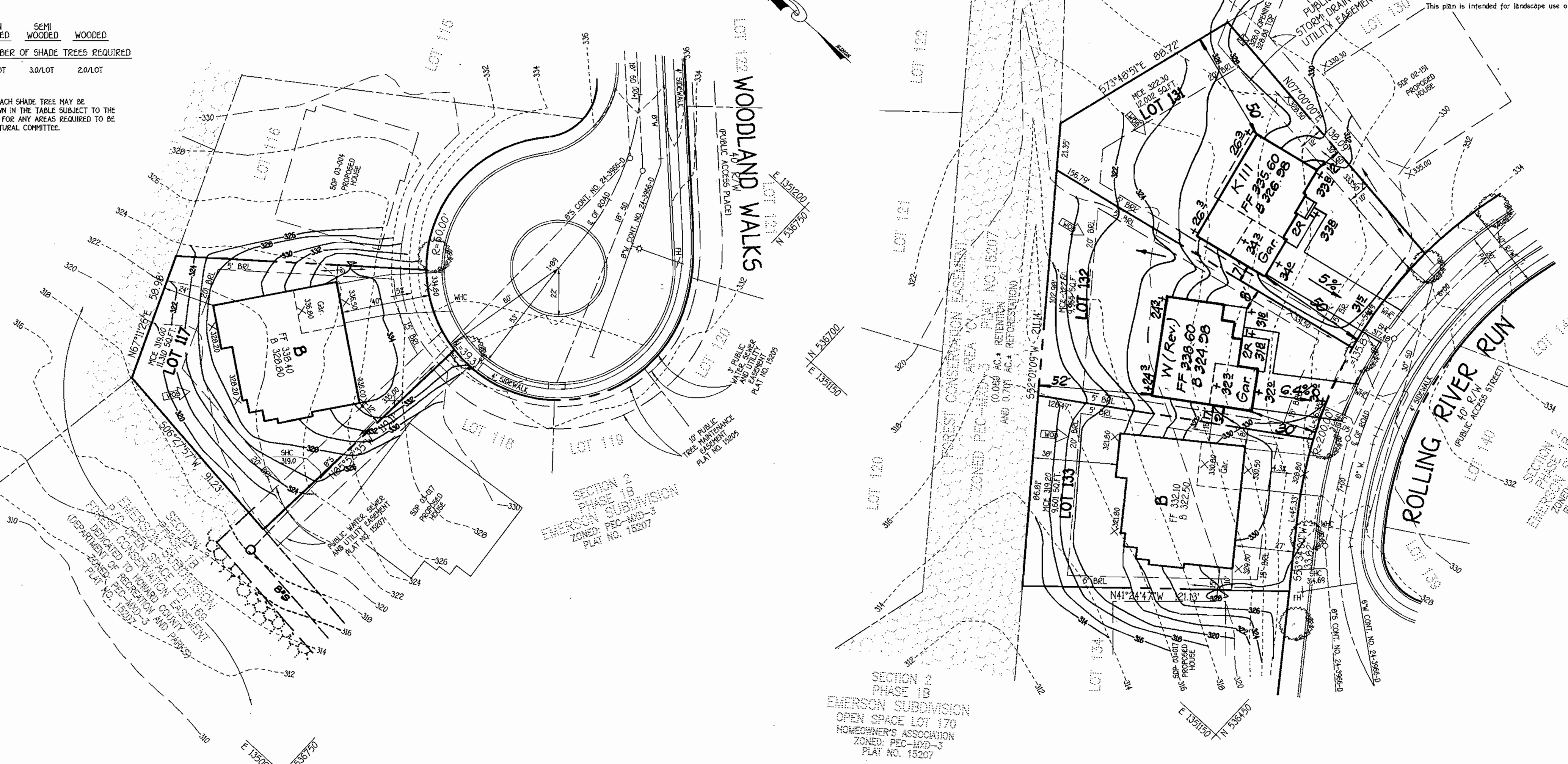
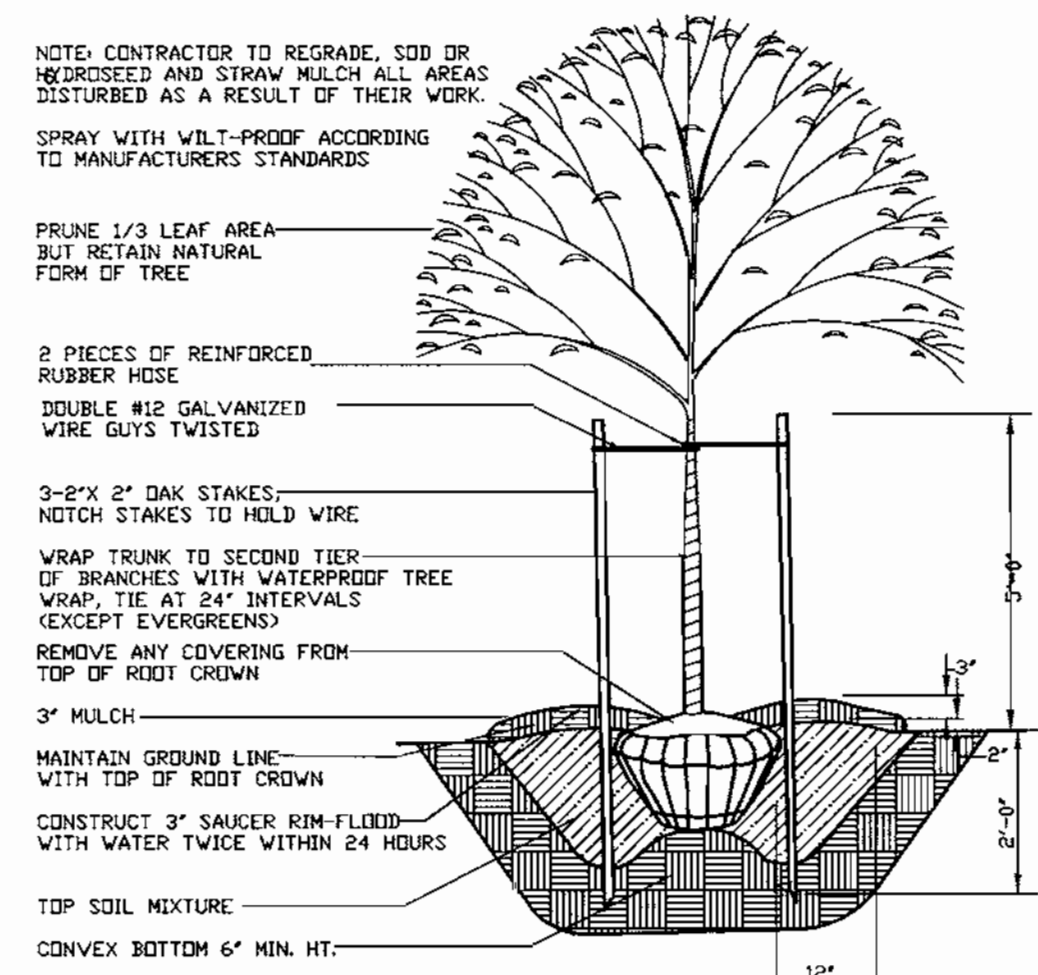
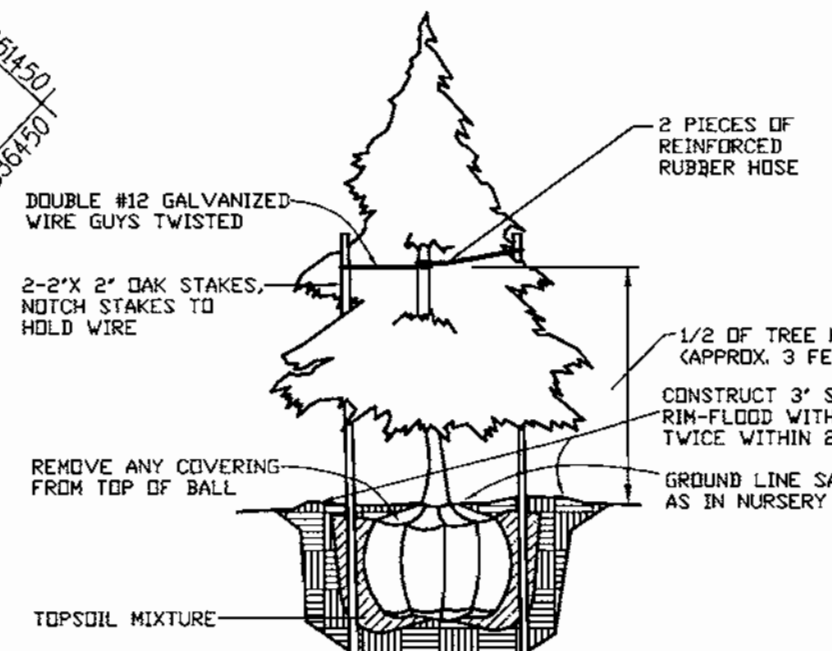
MODIFIED SCHEDULE C LANDSCAPE CHART

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 34,35, 60-64,110-112, 117 & 131-133	NON-WOODED	5 TREES PER LOT	N/A	N/A	0	0	70	0
TOTAL TREES							70	0

* 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.

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 (A.A.N.) 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 holdover 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", therein after "Landscape Guidelines" approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects, 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 is 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 based 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 fertilizer per cubic yard of planting mix. Fertilizer 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 fire graded and seeded. This plan is intended for landscape use only. See other plan sheets for more information on grading, sediment control, layout, etc.



BUILDER/DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT THE REQUIRED LANDSCAPING WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.24 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXCLUDED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME: ROBERT GOODIER 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.

Signature of Engineer CHARLES J. GROVO, SE. 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 ROBERT GOODIER Date

Reviewed for HOWARD SCD and meets Technical Requirements.

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.

Howard SCD Date

OWNER

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

BUILDER/DEVELOPER

GOODIER BUILDERS
 10705 CHARTER DRIVE
 SUITE #320
 COLUMBIA, MARYLAND 21044
 410-997-7400

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Planning and Zoning Date 4/6/02
 Chief, Development Engineering Division Date 10/29/02
 Director, Department of Planning and Zoning Date 11/8/02

PROJECT	EMERSON	SECTION	21B	LOTS NO.	34,35,60-64,110-112, 117 & 131-133
PLAT	15205, 15206, 15207	BLOCK NO.	8 & 9	ZONE	PEC-MXD-3
TAX/ZONE	47	ELEC. DIST.	6	CENSUS TR.	6068.02
WATER CODE	E-15	SEWER CODE	7640000		

SITE DEVELOPMENT PLAN

SINGLE FAMILY DETACHED EMERSON
SECTION 2 PHASE 1B
 LOTS 34,35,60-64,110-112,117 & 131-133

TAX MAP NO: 47 PARCEL: 3 & 837 GRID 8
 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: JULY, 2002

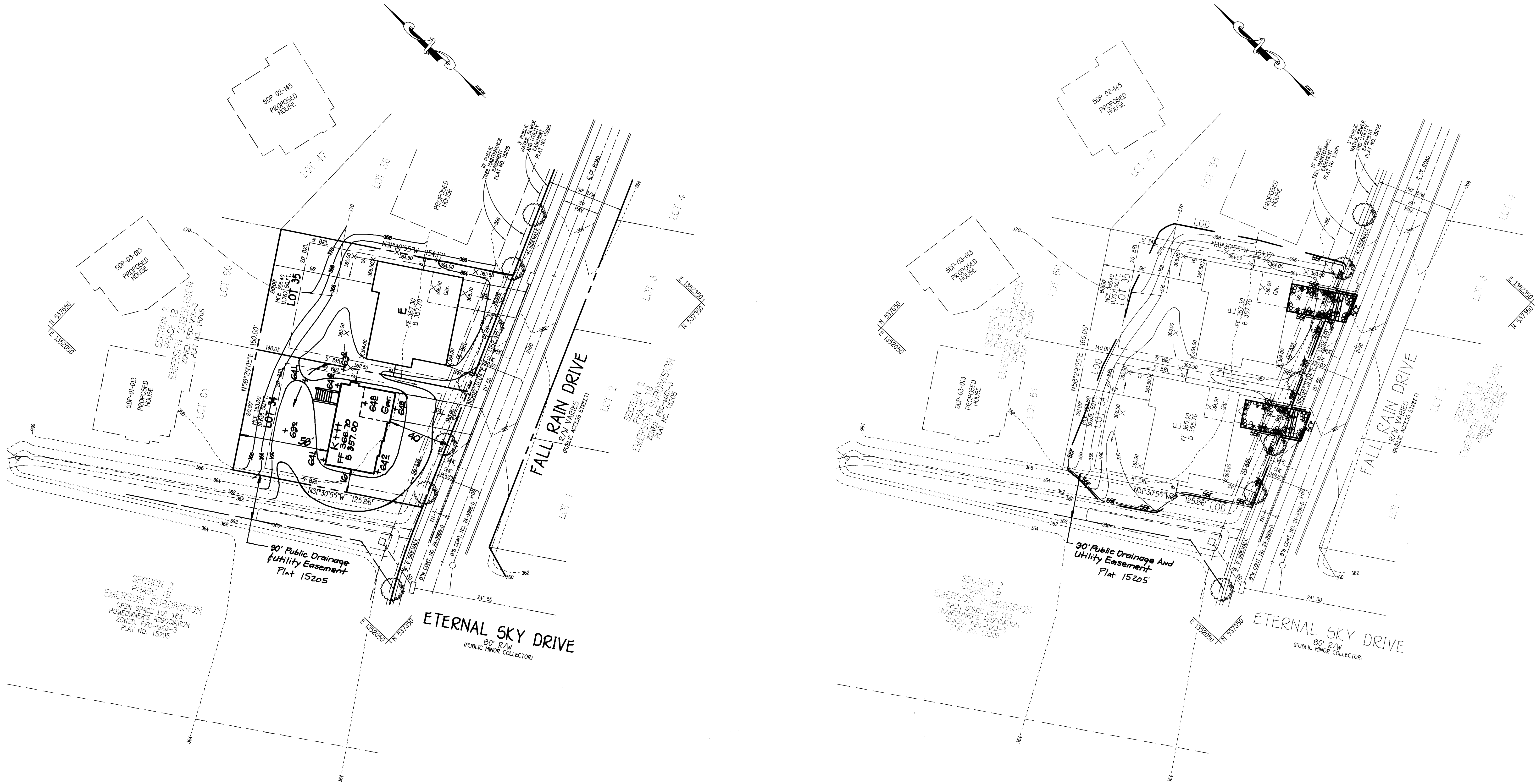
SHEET 5 OF 8

SDP 09-19

J:\50031-Emerson Property\50031-Emerson\11-25-02\11-25-02-11-28-35.dwg

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELKLOTT CITY, MARYLAND 21042
 (410) 461-2900

NO.	REVISION	DATE
2	Rev. hse. & grd. lot 132	4-8-03
1	Rev. hse. & grd. lot 131	3-26-03



J:\92001 Emerson Project\dwg\61755 Emerson 11-Codes\61755 SDP.tbl 34.35.dwg, 09/19/2002 09:30:12 AM

<p>FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLSWORTH CITY, MARYLAND 21042 (410) 461-2255</p>		
NO.	REVISION	DATE
1	Rev. Iss. \$9rd. lot 34 to show Ex. Cond.	11-30-04

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: *Charles J. Crovo, Sr.* Date: 9/18/02
CHARLES J. CROVO, SR.
 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: *Robert Goodier* Date: 9-19-02
ROBERT GOODIER

Reviewed for HOWARD SCD and meets Technical Requirements.

Signature: *Jim M. Gura* Date: 10/24/02
 D.A.-Natural Resource Conservation Service

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

Signature: *Jim K. Robinson* Date: 10/24/02
 HOWARD SCD

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

BUILDER/DEVELOPER
 GOODIER BUILDERS
 10705 CHARTER DRIVE
 SUITE 320
 COLUMBIA, MARYLAND 21044
 410-997-7400

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Andy Krametz* Date: 11/6/02
 Chief, Division of Land Development

Signature: *Mike Dammann* Date: 10/29/02
 Chief, Development Engineering Division MK

Signature: *Josh Smith* Date: 11/6/02
 Director, Department of Planning and Zoning HO

PROJECT	SECTION	LOTS NO.
EMERSON	2/1B	34,35,60-64,110-112, 117 & 131-133
PLAT	BLOCK NO.	ZONE
15205	8 & 9	PEC-MXD-3
15206		47
15207		6
WATER CODE	SEWER CODE	CENSUS TR.
E-15	7640000	6068.02

SITE DEVELOPMENT & SEDIMENT/EROSION CONTROL PLAN

SINGLE FAMILY DETACHED
EMERSON
 SECTION 2 PHASE 1B
 LOTS 34,35,60-64,110-112,117 & 131-133

TAX MAP No: 47 PARCEL: 3 & 837 GRID 8
 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: JULY, 2002
 SHEET 2 OF 8