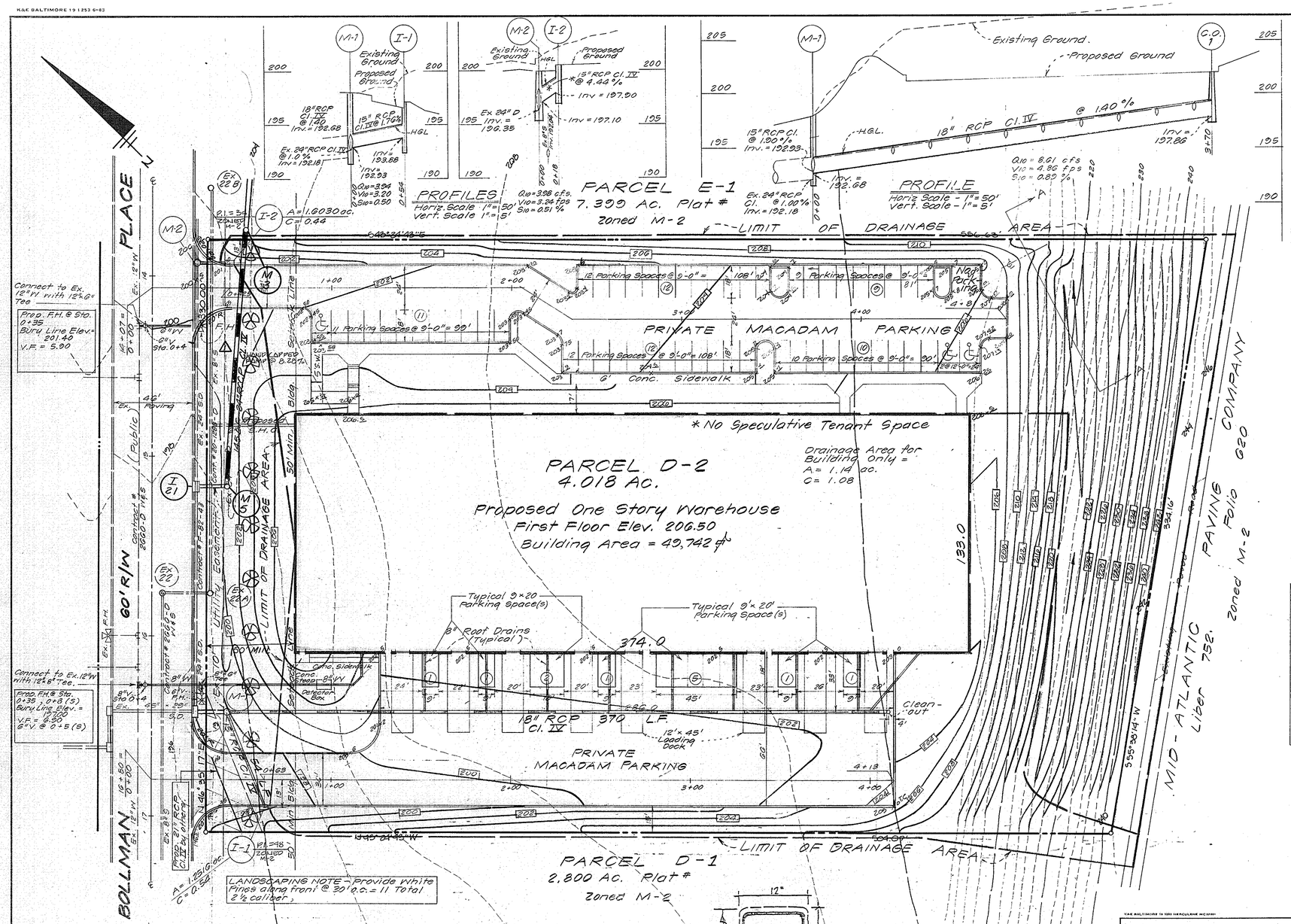
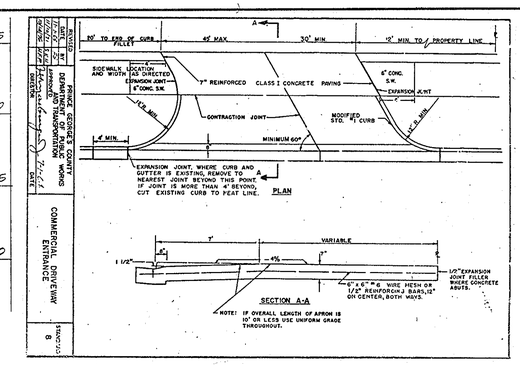
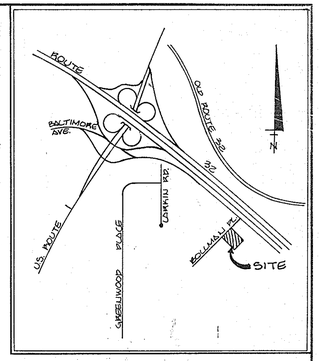
K&E BALTIMORE 19 1253 6-82







VICINITY MAP

SCALE: 1" = 2000'

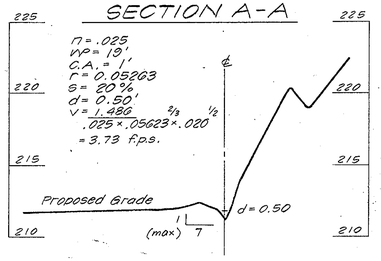
GENERAL NOTES

1. Area of Tract ..... 4.018 Acres
2. Existing Zoning of Tract M-2
3. Deed Reference Liber 1301, Folio 556
4. Public W & S are available.
5. Tax Map 47 Part of Parcel 16
6. SITE ANALYSIS

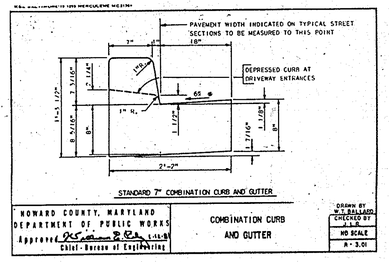
Open Space Required	=	20 % (.80 acres)
Open Space Provided	=	42 %
Building Coverage	=	28 %
Parking Required	=	15 Employees, 2 Visitor = 17 Total
Parking Provided	=	Phase 1 - 23 Spaces, including 1 Handicap; Phase 2 - 40 Spaces, including 2 Handicap

7. Stormwater Management for this site is provided under F-82-43.

SECTION A-A



APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-15-84



OWNER
PEERLESS PAPER MILLS, INC.
Oaks, Pa. 19456

DEVELOPER
NORWOOD INDUSTRIAL CONSTRUCTION CO., INC.
8280 Patuxent Range Dr.
Suite L Jessup, MD 20794

SHEET 1 OF 3

SITE DEVELOPMENT PLAN
SECTION 2 - PARCEL D-2
PEERLESS PAPER MILLS, INC.
CORRIDOR INDUSTRIAL PARK
Sixth Election District
Howard County, Maryland
Tax Map 47 P/o Parcel 16

EVANS, HAGAN & HOLDEFER, INC.
ENGINEERS, LAND PLANNERS & SURVEYORS
1052 WEST STREET / LAUREL, MD 20707
(301) 725-0665

DATE	REVISION	BY
8-16-85	1 Added 24" RCCP	JPH
8-16-85	2 Revised Struc. Schedule	JPH

539 POTOMAC STREET / CAMBRIDGE, MD 21613 (301) 228-3350
111 JOHN STREET / WESTMINSTER, MD 21157 (301) 848-1790
8013 BELAIR ROAD / BALTIMORE, MD 21236 (301) 668-1501

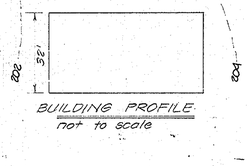
SURVEYED BY: T.C.
COMPUTED BY: J.P.G.
DRAWN BY: P.G.R./L.W.C.
CHECKED BY:
Drwg. No.
DATE 10-84 SCALE 1" = 30'

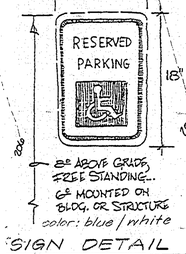
APPROVED: For Public Water and Public Sewerage Systems, Howard County Health Department
County Health Officer — Date 12-17-84

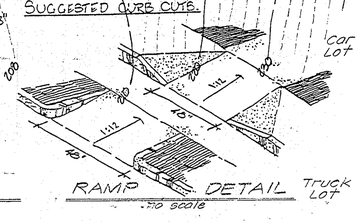
APPROVED: Howard County Department of Planning and Zoning
Planning Director — Date 12-19-84
Chief, Division of Land Development and Zoning Administration — Date 12-18-84

APPROVED: For Public Water and Public Sewerage, Storm Drainage Systems and Public Roads, Howard County Department of Public Works
Director — Date 12-11-84
Chief, Bureau of Engineering — Date 12-10-84

PARKING TABULATION







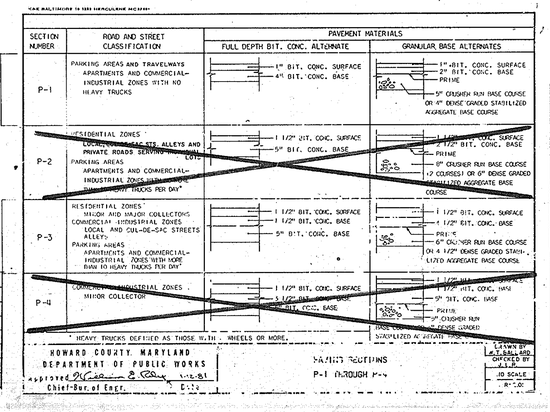
STREET ADDRESS CHART	
PARCEL D-2	BOLLMAN PLACE

SUBDIVISION NAME	SECTION / AREA	PARCEL
CORRIDOR INDUSTRIAL PARK	2	D-2

PLAT NO'S	BLOCK NO.	ZONE	TAX MAP	ELECT. DISTRICT	CENSUS TR.
5988	13	M-2	48	6th	6064

WATER CODE — SEWER CODE

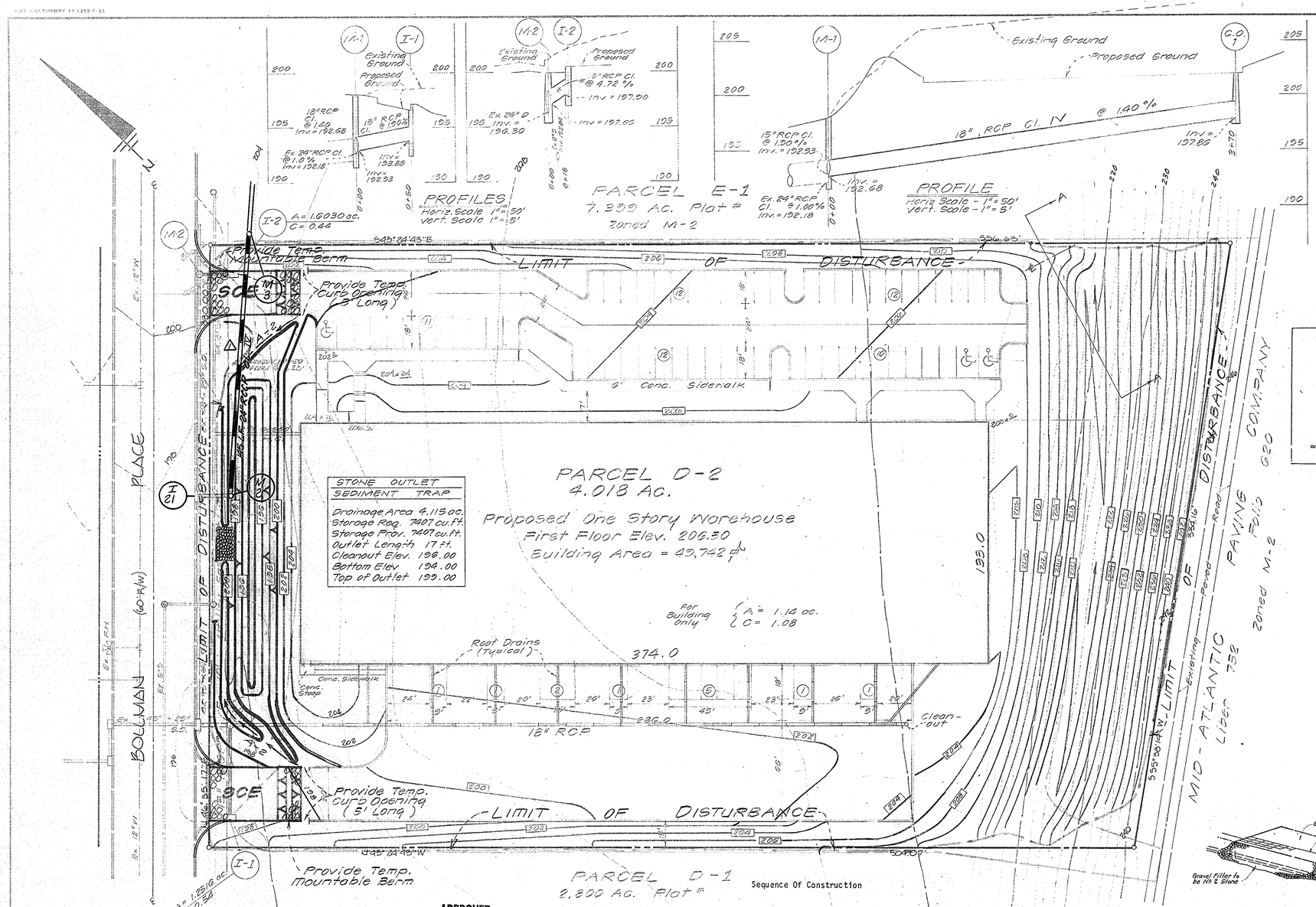
STRUCTURE SCHEDULE					
NO	TYPE	INV. IN	INV. OUT	TOP ELEV	REMARKS
I-1	Ho. Co. Std. Class A-5 Inlet		193.88	196.63	See Ho. Co. Std. Detail 6D-4.01
I-2	" " " " "		197.90	200.60	" " "
M-1	" " " Manhole	192.93	192.18	198.00	See Ho. Co. Std. Detail 6-5.01
M-2	" " " Manhole	197.10	196.30	200.60	" " "
M-3	" " " Manhole	196.68	191.18	203.68	See Ho. Co. Std. Detail 6-5.01
M-4	" " " Manhole	193.80	193.40	199.80	" " "

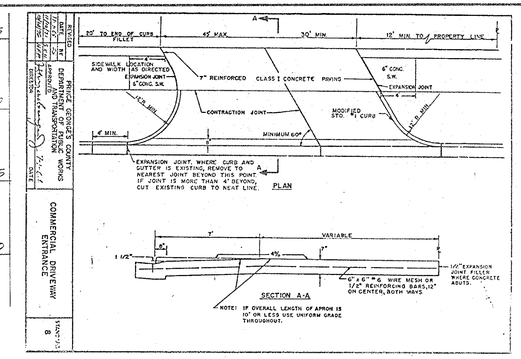


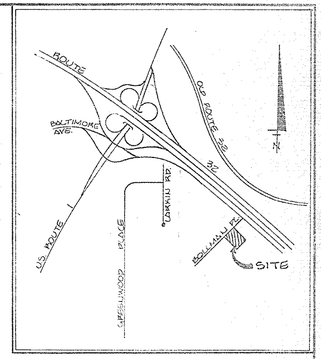
THE COLUMBIA DESIGN COLLECTIVE · ARCHITECTS
9114 FREDERICK ROAD ELLICOTT CITY, MARYLAND 21043 465-8644(BALTO) 596-4054(WASH) 621-5695(VA)

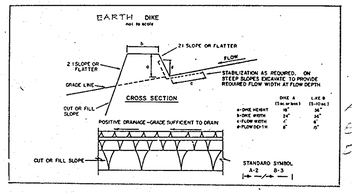
SDP-85-70

120-02-1 OF 3





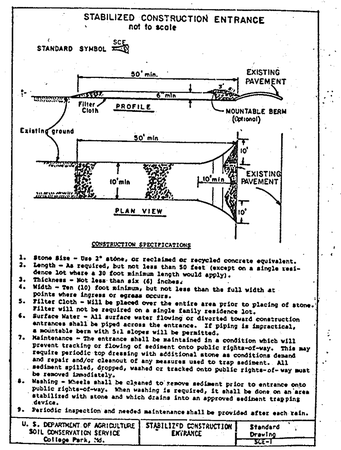


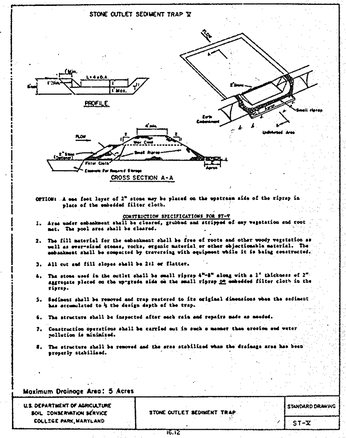


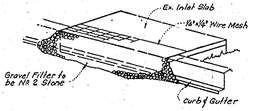
GENERAL NOTES

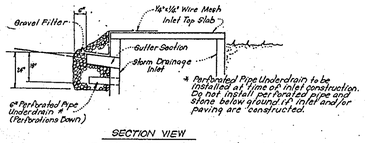
Area of Tract ..... 4.018 Acres
Existing Zoning of Tract M-2
Deed References

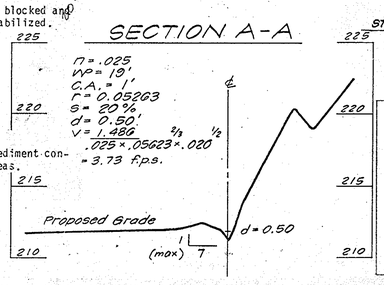
For more sed. control details, see Sheet 3 of 3











OWNER
PEERLESS PAPER MILLS, INC.
Oaks, Pa. 19456

DEVELOPER
NORWOOD INDUSTRIAL CONSTRUCTION CO., INC.
8280 Dorsey Run Rd.
Jessup, Md. 20794

SHEET 2 OF 3

SEDIMENT & EROSION CONTROL PLAN/DETAILS
PEERLESS PAPER MILLS, INC.
CORRIDOR INDUSTRIAL PARK
Sixth Election District
Howard County, Maryland
Tax Map 47 Parcel 3-2

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-15-84

APPROVED: For Public Water and Public Sewerage Systems, Howard County Health Department
County Health Officer — Date 12-17-84

APPROVED: Howard County Department of Planning and Zoning
Planning Director — Date 12-19-84
Chief, Division of Land Development and Zoning Administration — Date 12-18-84

APPROVED: For Public Water and Public Sewerage, Storm Drainage Systems and Public Roads. Howard County Department of Public Works
Director — Date 12-11-84
Chief, Bureau of Engineering — Date 12-10-84

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Howard S. C. D. — Date 12-4-84

REVIEWED FOR Howard S. C. D. AND MEETS TECHNICAL REQUIREMENTS.
U.S. SOIL CONSERVATION SERVICE — DATE 12-7-84

Sequence Of Construction

1. Notify Howard County Bureau Of Inspection & Permits at least 24 hours before starting any work.
2. Construct all sediment control measures shown. "Limits of disturbance" noted on plan shall be inside along property line.
3. Existing stubs from storm drain inlets must be properly blocked and inspected by Department of Public Works sediment control inspector prior to grading.
4. Rough grade site and construct parking areas to subgrade.
5. Construct storm drain system. Inlet openings to be blocked and remain so until all contributing areas have been stabilized. Construct water and sewer house connections. Construct all remaining utilities.
6. Construct proposed warehouse building.
7. Construct concrete curb and gutter.
8. Construct final paving and fine grade site. Stabilize all disturbed areas.
9. Upon sediment control inspectors approval, remove sediment control devices. Stabilize all remaining disturbed areas.
10. Maintenance.

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 — Date

DEVELOPER'S CERTIFICATE

I/We certified that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personal involved in the construction project will have a certificate of attendance at a Dept. Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.
Fran Speed
Signature and Title of Developer — Date

THE COLUMBIA DESIGN COLLECTIVE · ARCHITECTS
9114 FREDERICK ROAD ELLICOTT CITY, MARYLAND 21043 465-9444 (BALTO) 596-6054 (WASH) 621-1685 (VA)

EVANS, HAGAN & HOLDEFER, INC.
ENGINEERS, LAND PLANNERS & SURVEYORS
1052 WEST STREET / LAUREL, MD 20707 (301) 725-0665
539 POPLAR STREET / CAMBRIDGE, MD 21613 (301) 228-3350
111 JOHN STREET / WESTMINSTER, MD 21157 (301) 848-1750
8013 BELLONA AVE. / BALTIMORE, MD 21222 (301) 366-1501

DATE	REVISION	BY
8-16-85	△ Added 24" RCCP	JPH

SURVEYED BY TC
COMPUTED BY JDG
DRAWN BY RBR/LWC
CHECKED BY
Drwg. No. 00127
DATE 10-84 SCALE 1"=30'

S.D.P.-85-70

120-02-2 OF 3

STANDARD AND SPECIFICATIONS
FOR
VEGETATIVE STABILIZATION
TEMPORARY SEEDING

SPECIFICATIONS

I. Site Preparation

A. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.

B. Final grading and shaping has usually not been completed for temporary seedings.

II. Soil Amendments

For temporary seedings, fertilizer shall be applied at the rate of 600 lbs/ac. or 15 lbs/1,000 sq. ft., using 10-10-10 or equivalent. Soils which are highly acid should be limed.

III. Seedbed Preparation

When the area to be seeded has been recently loosened to the extent that an adequate seedbed exists, no additional treatment is required.

However, when the area to be seeded is packed, crusted, and hard, the top layer of soil shall be loosened by discing, raking or other acceptable means before seeding.

IV. Seeding

A. Select a mixture from Table 50-1.

B. Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry includes seed and fertilizer).

V. Mulching

When seedings are made on critical sites or adverse soil conditions, mulch material will be applied immediately after seeding. Seedings made during optimum seeding dates and with favorable soils on very flat areas may not need to be mulched. Mulch materials are listed in order of their effectiveness.

A. Materials and Amounts

1. Mulch mattings - such as jute or excelsior blanket shall be stapled to the surface in waterways and on steep slopes. Lighter materials of paper, plastic and cotton mulch mattings may be used where erosion hazard is not severe. If the area is to be mowed, do not use metal staples.

2. Straw - Material shall be unrotted small grain straw applied at the rate of 1½ to 2 tons per acre, or 70 to 90 (two bales) pounds per 1,000 sq. ft. Mulch materials shall be relatively free of all kinds of weeds and shall be free of prohibited noxious weeds such as: thistles, Johnsongrass and quackgrass.

Spread uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 sq. ft. section and place 70-90 lbs. of mulch in each section.

3. Wood chips - at the rate of approximately 6 tons per acre or 275 lbs. per 1,000 sq. ft. may be used when available and when feasible to use.

4. Wood cellulose fiber - mulch at the rate of 1,500 pounds per acre or 35 pounds per 1,000 sq. ft. may be applied by hydroseeding.

B. Mulch anchoring shall be accomplished immediately after mulch placement 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, erosion hazard, and cost. On sloping land, practice No. 1 below, should be done on the contour wherever possible, except "tracking" should be done up and down the slope with 1½ inch cleat marks running across the slope.

1. Mulch Anchoring Tool and Tracking. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the surface 2 inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. Tracking is primarily used on steeper than 3:1 cut and fill slopes to cut the mulch into the soil with cleated bulldozer tracks.

2. Mulch Nettings - Staple lightweight biodegradable paper, plastic or cotton nettings over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4-feet wide and up to 300-feet long.

3. Liquid Mulch Binders
Application of liquid binders should be heavier at edges where wind catches mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance. Caution should be used with asphalt in residential and similar areas.

a. Cutback asphalt - rapid curing (RC-70, RC-250, and RC-800) or medium curing (MC-250 or MC-800). Apply 5 gallons per 1,000 square feet or 218 gallons per acre on flat areas, and on slopes less than 8-feet high. On slopes 8-feet or more high, use 8 gallons per 1,000 square feet or 348 gallons per acre.

b. Emulsified asphalt - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, and CRS-2). Apply 5 gallons per 1,000 square feet or 218 gallons per acre on flat areas and on slopes less than 8-feet high. On slopes 8-feet or more high, use 8 gallons per 1,000 square feet or 348 gallons per acre.

All asphalt designations are from the Asphalt Institute Specifications.

c. Synthetic binders - Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset or Terra Tack may be used at rates recommended by the manufacturer to anchor mulch material.

4. Wood cellulose fiber - 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 fiber per 100 gallons.

5. Peg and Twine - Drive 8-to 10-inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross within a square pattern. Secure twine around each peg with two or more round turns.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

TABLE 50-1

Temporary Seedings by Rates, Depths and Dates

Species 3/	Seeding Rate: Per Acre	Seeding Rate: Lbs/1000 Sq. Ft.	Planting Depth 2/ (Inches)	Coastal Plain 2/1-4/30	Coastal Plain 5/1-8/14	Coastal Plain 8/15-11/30	Piedmont 3/1-4/30	Piedmont 5/1-8/14	Piedmont 8/15-11/15	Mountains 3/15-5/31	Mountains 6/1-7/31	Mountains 8/1-10/31
Choose one:												
Barley	2½ bu.	2.8	1-2	5/ x	-	By 10/15	5/ x	-	By 10/15	x	-	By 10/1
Oats	3 bu.	2.2	2-2	x	-	-	x	-	-	x	-	-
Rye	2½ bu.	3.2	1-2	x	-	x	x	-	x	y	-	x
Italian or perennial ryegrass 1/	40 lbs.	.92	¼-½	5/ x	-	By 11/1	5/ x	-	By 11/1	x	-	By 8/15
Millet	40 lbs.	.92	[illegible]	-	x	-	-	x	-	-	x	-
Weeping, Boer, or Lehmann's lovegrass	3 lbs.	.07	¼-½	-	x	-	-	x	-	-	x	-
Sudangrass 4/	40 lbs.	.92	1-2	-	x	-	-	y	-	-	x	-

Seeding Dates 6/

1/ Use only on areas where seed stalks and volunteer growth are acceptable.
2/ Applicable on slopes 3:1 or less.
3/ Use varieties currently recommended for Maryland. Use certified seed when available.
4/ Use common sudangrass varieties only. Do not use hybrids.
5/ Twenty pounds per acre of annual lespedeza may be added to ½ the seeding rate of any species used for seedings.
6/ Between fall and spring seeding dates, use mulching only or sodding practices.
x Applicable during entire period.
- Not applicable in period.

STANDARD AND SPECIFICATIONS
FOR
VEGETATIVE STABILIZATION
PERMANENT SEEDINGS

SPECIFICATIONS

Vegetation cannot be expected to provide an erosion control cover and prevent soil slippage on a soil that is not stable due to its texture, structure, water movement or excessivly steep slope.

Minimum soil conditons needed for the establishment and maintenance of a long-lived vegetative cover:

A. Enough fine-grained materials (over 30 percent silt plus clay) to provide the capacity to hold at least a moderate amount of available moisture. Noticeable exception would be planting lovegrass and serecia lespedeza which can be planted on a sandy soil.

B. Sufficient pore space to permit adequate root penetration.

C. The soil shall be free from any material harmful to plant growth.

D. If these conditions cannot be met, see specification, Topsoiling (57.01).

I. Site Preparation

A. Install needed erosion and sediment control practices such as dikes, contour ripping, erosion stops, channel liners, sediment basins, or other practices.

B. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, anchoring and maintenance.

II. Soil Preparation

Flat areas and slopes up to 3 to 1 grade shall be loose and friable to a depth of at least 3 inches. The top layer of soil shall be loosened by raking, discing or other acceptable means before seeding.

Slopes steeper than 3 to 1 shall have the top 1-3 inches of soil loose and friable before seeding.

III. Soil Amendments

Lime and fertilize according to soil tests. Lime and fertilizer needs can be determined by a soil testing laboratory, such as the University of Maryland's Soil Testing Laboratory.

In lieu of soil test results, apply two tons dolomitic limestone per acre and one of the following rates of fertilizer: 1,000 pounds 10-10-10 or equivalent per acre. For a longer lasting fertilizer treatment apply 600 pounds 10-10-10 or equivalent per acre and disk in and at time of seeding apply an additional 400 pounds of a ureaform fertilizer of a grade of at least 30-0-0 per acre. Apply the lime and fertilizer before seeding and harrow or disk uniformily into the soil to a minimum depth of 3 inches on slopes flatter than 3:1. On slopes steeper than 3:1 grade, the lime and fertilizer shall be worked the best way possible. On sloping land, the final harrowing or discing operation should be on the contour wherever feasible. No attempt should be made to drag any disked area to make the soil surface smooth after disking.

Note. The slow release ureaform fertilizer will supply nitrogen over a longer period of time.

IV. Seeding

A. Select a mixture from table 51-1.

B. Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry includes seed and fertilizer) on a firm, moist seedbed. Maximum seeding depth should be 1/4 inch on clayey soils and 1/2 inch on sandy soils, when using other than hydroseeder method of application. Note: If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be immediate without interruption.

V. Mulching

Mulch materials are listed in order of their effectiveness. Mulch mattings are normally only used on critical areas such as waterways or steep slopes.

A. Materials and Amounts

1. Mulch mattings - such as jute or excelsior blanket shall be stapled to the surface in waterways and on steep slopes. Lighter materials of paper, plastic and cotton mulch mattings may be used where erosion hazard is not severe. If the area is to be mowed, do not use metal staples.

2. Straw - Straw shall be unrotted small grain applied at the rate of 1½ to 2 tons per acre, or 70 to 90 (two bales) pounds per 1,000 square foot. Mulch materials shall be relatively free of all kinds of weeds and shall be free of prohibited noxious weeds such as: thistles, Johnsongrass and quackgrass.

Spread uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 square feet section and place 70-90 pounds of mulch in each section.

3. Wood chips - at the rate of approximately 6 tons per acre or 275 pounds per 1,000 square foot may be used when available and when feasible. These are particularly well-suited for utility and road rights-of-way. If wood chips are used, increase the application rate of nitrogen fertilizer by 20 pounds (200 pounds 10-10-10 or 66 pounds 30-0-0).

4. Wood cellulose fiber - mulch at the rate of 1,500 pounds per acre or 35 pounds per 1,000 square foot may be applied by hydroseeding.

B. Mulch anchoring shall be accomplished immediately after mulch placement 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, erosion hazard, and cost. On sloping land, practice No. 1 below, should be done on the contour whenever possible. Contouring of all operations applies to all straw and wood chip practices on more critical sites, except "tracking" should be done up and down the slope with 1½ inch cleat marks running across the slope.

1. Mulch Anchoring Tool and Tracking. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the surface 2 inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. "Tracking" is primarily used on 3:1 or steeper cut and fill slopes to cut the mulch into the soil by 1½" track cleats of a bulldozer making groves across the slope.

2. Mulch Nettings - Staple lightweight biodegradable paper, plastic or cotton nettings over the mulch according to manufacturer's recommendations. Netting is usually avaialble in rolls 4 feet wide and up to 300 feet long.

3. Liquid Mulch Binders - Applications of liquid binders should be heavier at edges where wind catches mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance. Caution should be used with asphalt in residential and similar areas.

a. Cutback asphalt - rapid curing (RC-70, RC-250, and RC-800) or medium curing (MC-250 or MC-800). Apply 5 gallons per 1,000 square feet or 200 gallons per acre on flat areas and on slopes less than 8 feet high. On slopes 8 feet or more high, use 8 gallons per 1,000 square feet or 348 gallons per acre.

b. Emulsified asphalt - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, and CRS-2). Apply 5 gallons per 1,000 square feet or 200 gallons per acre on flat areas and on slopes less than 8 feet high. On slopes 8 feet or more high, use 8 gallons per 1,000 square feet or 348 gallons per acre.

All asphalt designations are from the asphalt Institute Specifications.

c. Synthetic binders - Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset or Terra Tac II or Terra Tack AR may be used at rates recommended by the manufacturer to anchor mulch material.

4. Wood cellulose fiber - 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.

5. Peg and Twine - Drive 8-to 10-inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross within a square pattern. Secure twine around each peg with two or more complete turns.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

VI. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth until they are firmly established, if feasible. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

VII. Maintenance

Maintenance is a vital factor in maintaining an adequate vegetative erosion control cover.

A. Irrigation - If soil moisture becomes deficient, irrigate to prevent loss of stand of protective vegetation, if feasible.

B. Repairs - Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season, if possible.

1. If stand is inadequate for erosion control, overseed and fertilize using half of the rates originally applied.

2. If stand is over 60% damaged, reestablish following original lime, fertilizer, seedbed preparation and seeding recommendations.

References:

1. Lawn Care in Maryland, Bulletin 171; Cooperative Extension Service, University of Maryland, College Park, Maryland.

2. Maryland Agronomy Memo #72.

3. Maryland Highway Administration Specifications for Materials.

4. USDA-Soil Conservation Service Field Office Technical Guides.

Note: Maryland Department of Water Resources has developed an audiovisual training program, "Plant Materials and Vegetative Soil Stabilization," which relates to this practice.

TABLE 51-1
Permanent Seeding and Seeding Dates

OPTIMUM SEEDING DATES (d)

Mix No.	SEEDING MIXTURES (Use Certified Seed if available)	SEEDING RATE Lbs/ Acre	SEEDING RATE Lbs/1000 Sq.Ft.	Coastal Plain 2/1-4/30	Coastal Plain 5/1-8/14	Coastal Plain 8/15-10/31	Piedmont 3/1-4/30	Piedmont 5/1-7/31	Piedmont 8/1-10/15	Mountains 3/1-5/31	Mountains 6/1-7/31	Mountains 8/1-9/30
1	'Kentucky 31' Tall Fescue*	60	1.38	x	-	x	x	-	x	x	-	x
2	'Kentucky 31' Tall Fescue* 'Boer' 'Lehmans' (a) Weeping Lovegrass	60 2	1.38 .05	-	x	-	-	x	-	-	x	-
3	'Kentucky 31' Tall Fescue* 'Korean' lespedeza (b) inoculated (h)	50 15	1.15 .34	x	-	-	x	-	-	-	-	-
4	'Kentucky 31' Tall Fescue* 'Interstate' Sericea lespedeza (b)(h) inoculated (h)	40 20	.92 .46	x	-	x	x	-	x	x	-	x
5	'Kentucky 31' Tall Fescue* Birdsfoot trefoil, inoculated (h)	40 10	.92 .23	-	-	-	-	-	-	x 2000' elev. & above	-	-
6	Chemung Crownvetch, inoculated (h) Redtop	15 3	.34 .07	x	-	-	x	-	-	x	-	x
7	Chemung Crownvetch, inoculated (h) 'Kentucky 31' Tall Fescue*	15 40	.46 .92	x	-	-	x	-	-	x	-	-
8	'Kentucky 31' Tall Fescue (75%) Redtop (5%) Canada Bluegrass (10%) Kentucky Bluegrass (10%)(e)	90	2	x	-	x	x	-	x	x	-	x
9	Kentucky Bluegrass (50%) 'Pennlawn' Creeping Red Fescue (40%) Redtop (10%)(e)	90	2	x	-	x	x	-	x	x	-	x
	Droughty Areas											
10	'Kentucky 31' Tall Fescue* Redtop	30 5	.69 .11	x	-	x	x	-	x	x	-	x
11	Weeping lovegrass Serecia lespedeza (b) inoculated (h)	2 20	.05 .46	x	x	-	x	x	-	x	x	-
	Poorly Drained Areas											
12	'Kentucky 31' Tall Fescue*	30	.69	x	-	x	x	-	x	x	-	x
13	Reed canarygrass (c)	10	.23	-	-	x	-	-	x	-	-	x
	Shaded Areas											
14	'Kentucky 31' Tall Fescue*	60	1.38	x	-	x	x	-	x	x	-	x
15	Red Fescue 'Jamestown' or 'Pennlawn'	40	.92	x	-	x	x	-	x	x	-	x
	Lawns & High Maintenance Areas											
16	'Plush', 'Birka', 'Parade', 'Vantage') 'Columbia', 'Merion', 'Adelphi', 'South)** Dakota', 'Kenblue', Kentucky Bluegrass) Red Fescue, 'Pennlawn' or 'Jamestown'	90 10	2 .23	x	-	x	x	-	x	x	-	x
17	'Kentucky 31' Tall Fescue* (g)	220-260	5-6	x	x(f)	x	x	x(f)	x	x	x(f)	x

*Use Certified Seed Only
**Any three(3) varieties at 30 lbs. each to make the 90 lb mix.

Footnotes - Table 51-1

Permanent Seedings and Seeding Dates (Cont'd)

(a) Use Weeping lovegrass to provide a stand of grass for erosion control during summer.

(b) Use hulless seed.

(c) Preferable to seed in fall with seed from current year's crop.

(d) Mixtures 1,3,4,5,6,7,8,10,11,12,13 and 14 may be seeded during winter months in an emergency if 2 tons per acre of a well-anchored mulch is used.

(e) Approved State Highway Administration Mixtures.

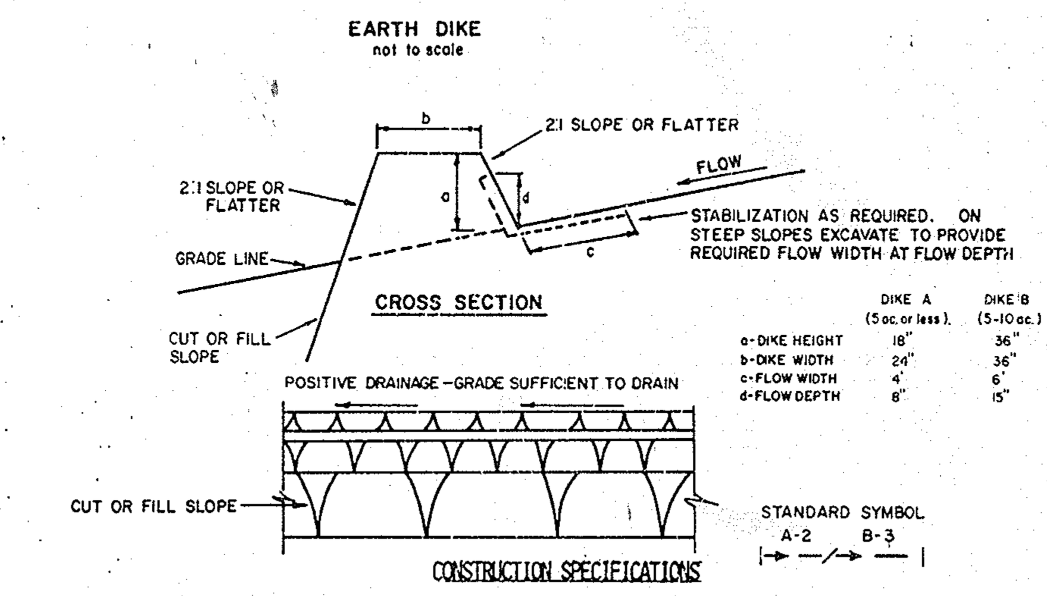
(f) Can be seeded during this period if irrigation water is used. Use 2 tons per acre of well-anchored straw mulch.

(g) Can use 10 percent Kentucky bluegrass. (MD AGRON MEMO #72).

(h) Leguminous Seeds. All leguminous seeds shall be inoculated or treated with unexpired approved culture for the specific legume in the proper proportions as specified on the package label. The inoculant shall be stored at room temperatures, out of direct sunlight and away from heating units. When seeding dry with mechanical seeders, the following method of mixing the inoculant with the seed shall be followed. The culture in powder form is preferred and shall be thoroughly mixed with the seed by using a very small quantity of water; just enough to dampen the seeds before the culture is powdered on. The leguminous seed is then mixed with the other seeds of the formula. Seeds inoculated with the powder shall be sown within 48 hours after treatment. Seeds inoculated with the liquid culture shall be sown within 24 hours after treatment. Inoculated seed not used within these time periods shall be reinoculatd. Inoculant and seed treated with inoculant shall not be exposed to sunlight for more than one hour prior to seeding. When seed is applied by hydraulic seeders, 10 times the quantity of inoculant recommended for dry leguminous seed application shall be used. Inoculated seed shall not be held in a slurry with fertilizer for more than one hour, otherwise reinoculation will be required before applying the seed.

Notes: (1) Scientific names of these plants are in Appendix B-1.02.

EARTH DIKE
not to scale



	DIKE A (5 ac. or less)	DIKE B (5-10 ac.)
a-DIKE HEIGHT	18"	36"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	8"	15"

CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	EARTH DIKE	STANDARD DRAWING ED-1

10.03

GENERAL NOTES

1. Grading permits shall be obtained prior to installation of sediment control and grading.

2. All sediment and erosion control measures will be installed and stabilized according to this plan prior to any other grading, clearing or distrubance of the existing surface of the site. See note No. 6 for stabilization except that the seed mixture will be annual rye applied at a rate of 1.4 lb./ 1,000 s.f.

3. Notify the Bureau of Inspections and Permits at least 24 hours before starting any work.

4. All sediment control practices to conforms to the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" and shall be adjusted to meet actual field conditions.

5. Stabilization of disturbed gournd to be done as soon after construction as possible.

6. All structural sediment control measures are to remain in place until permission for there removal has been obtained from the Bureau of Inspections and Permits.

7. On-site inspection and maintenance of all sediment control measures including clean-out of sediment traps and dikes, and proper establishment of all planned vegetative measure will be the responsibility of the developer or his representative on the site, on a continuing day to day basis.

8. It will be the developer's responsibility to provide additional sediment and erosion control devices to protect stabilized areas during construction.

9. The contractor shall keep all public roads free of sediment deposits left from traffic leaving construction site.

10. Site Analysis:

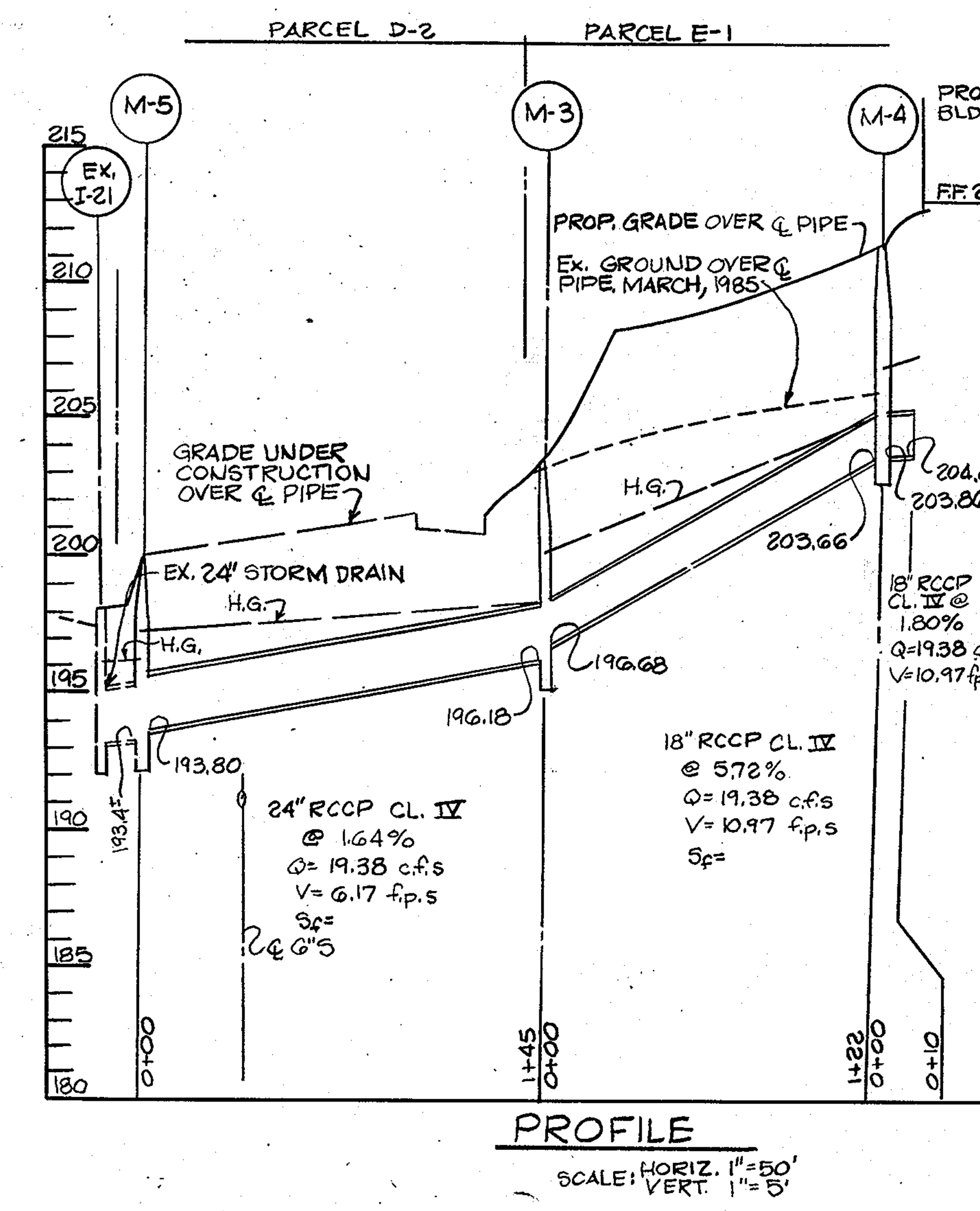
a. Total Area: 4.018 Acres

b. Area To Be Paved: 1.20 Acres

c. Area To Be Seeded: 2.818 Acres

d. Area Undisturbed: NONE Acres

11. Any area not actively graded for a period of 30 days shall be stabilized.



PROFILE
SCALE: HORIZ. 1"=50' VERT. 1"=5'

APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-15-84

APPROVED: For Public Water and Public Sewerage Systems.
Howard County Health Department
12-17-84
County Health Officer Date

APPROVED: Howard County Department of Planning and Zoning.
12-19-84
Planning Director Date
12-18-84
Chief; Division of Land Development and Zoning Administration Date

APPROVED: For Public Water and Public Sewerage, Storm Drainage Systems and Public Roads.
Howard County Department of Public Works
12-11-84
Director Date
12-10-84
Chief; Bureau of Engineering Date

Reviewed for Howard S.C.D.
Name
and meets Technical Requirements.

12-4-84
U.S. Soil Conservation Service Date

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

12-4-84
Howard S.C.D. Date

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."

Ivan Speed
Signature of Developer Date

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 Date
RODOLPH MAY JR.

DESIGNED MJP	SEDIMENT CONTROL DETAILS Section 2 Parcel D-2	SCALE AS SHOWN
DRAWN LWC	PEERLESS PAPER MILLS @ CORRIDOR INDUSTRIAL PARK	DWG NO. 3 of 3
CHECKED RLM		JOB NO.
DATE Nov 14 1984	SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	FILE NO.

EVANS, HAGAN & HOLDEFER, INC.

DATE	REVISION	BY
8-16-85	⚠ Added Profile	JPH

ENGINEERS, LAND PLANNERS & SURVEYORS
8101 Sandy Spring Rd LAUREL, MD 20707
(301) 725-0665

539 POPLAR STREET / CAMBRIDGE, MD 21613 (301) 228-3350
111 JOHN STREET / WESTMINSTER, MD 21157 (301) 848-1790
8013 BELAIR ROAD / BALTIMORE, MD 21236 (301) 882-1501

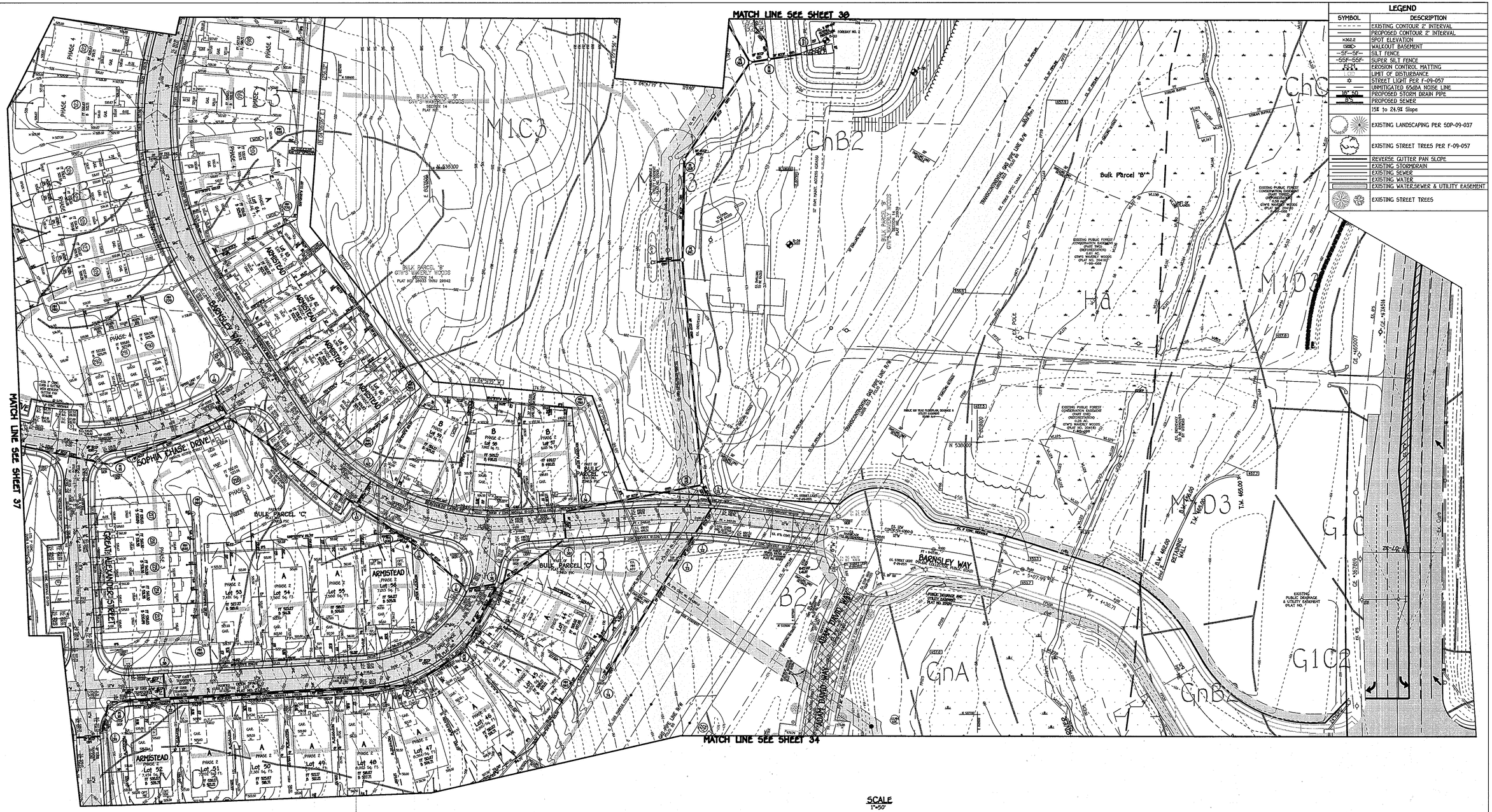
SURVEYED BY
COMPUTED BY
DRAWN BY
CHECKED BY
Drwg. No.

STATE OF MARYLAND RODOLPH MAY JR. No. 9700 REGISTERED PROFESSIONAL ENGINEER

DATE SCALE

SDP-85-70

120-02-3 OF 3



LEGEND

SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	PROPOSED CONTOUR 2' INTERVAL
×3622	SPOT ELEVATION
(WO)	WALKOUT BASEMENT
-SF-SF-	SILT FENCE
-SSF-SSF-	SUPER SILT FENCE
	EROSION CONTROL MATTING
	LIMIT OF DISTURBANCE
	STREET LIGHT PER F-09-057
	UNMITIGATED 65dBA NOISE LINE
18" SD	PROPOSED STORM DRAIN PIPE
8"S	PROPOSED SEWER
	15% to 24.9% Slope
	EXISTING LANDSCAPING PER SDP-09-037
	EXISTING STREET TREES PER F-09-057
	REVERSE GUTTER PAN SLOPE
	EXISTING STORMDRAIN
	EXISTING SEWER
	EXISTING WATER
	EXISTING WATER,SEWER & UTILITY EASEMENT
	EXISTING STREET TREES

REVISED

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
2	Rev. Title Block	12-19-11
1	Rev. to add fee simple lots per F-10-113	1-12-11

STATE OF MARYLAND — TERRELL A. FISHER — REGISTERED PROFESSIONAL ENGINEER

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 9757 EXPIRATION DATE IS 3/3/12.

TERRELL A. FISHER, PROFESSIONAL ENGINEER — DATE 12/8/10

BUILDERS

NV HOMES
6085 MARSHALEE DRIVE
SUITE 130
ELKRIDGE, MD. 21075
410-379-5956

RYAN HOMES
6085 MARSHALEE DRIVE
SUITE 140
ELKRIDGE, MD. 21075
410-379-5956

DEVELOPER

WAVERLY WOODS DEVELOPMENT CORPORATION
C/O LAND DESIGN AND DEVELOPMENT, INC.
5300 DORSEY HALL DRIVE, SUITE 102
ELLICOTT CITY, MARYLAND 21042
443-367-0422

OWNERS

WAVERLY WOODS DEVELOPMENT CORPORATION,
C/O LAND DESIGN AND DEVELOPMENT, INC.
5300 DORSEY HALL DRIVE, SUITE 102
ELLICOTT CITY, MARYLAND 21042
443-367-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kent Sheubrooks — Chief, Division of Land Development — 1/13/11 Date
Chief, Development Engineering Division — 1/7/11 Date
Director - Department of Planning and Zoning — 1/14/11 Date

PROJECT		SECTION		PARCEL NO. C
GTW'S WAVERLY WOODS		14		PHS. III & IV UNITS 49-119, 153-161, 196-200 & 213-328

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
21427-21435	3 & 4	PSC	16	THIRD	60300

WATER CODE	SEWER CODE
K-02	5992000

DRAINAGE AREA MAP/SOILS MAP

AGE RESTRICTED ADULT HOUSING
GTW'S WAVERLY WOODS
SECTION 14
BULK PARCEL 'C', PLAT NO.S 21427-21435
"THE COURTYARDS AT WAVERLY WOODS - WEST"
PHASE II LOTS 5, 12 THRU 39, 44 THRU 64 &
PHASE III & IV UNITS 49 THRU 119, 153 THRU 161, 196 THRU 200 & 213 THRU 328
TOWNHOUSE CONDOMINIUMS & SINGLE FAMILY HOMES
ZONING: PSC
TAX MAP NO.: 16 GRID NO.: 3 & 4 PARCEL NO.: PART OF 249
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER 19, 2011
SHEET 36 OF 100

SDP-09-039

SDP-09-039

K:\SDSKPROJ\30770 GTW WEST\dwg\Construction Documents\Redline - Phase 2 Fee-Simple Lots\Construction Document - 30770 Sheet 34-41 Sd Da Map.dwg, 12/8/2010 8:45:26 AM, tony, 1:1