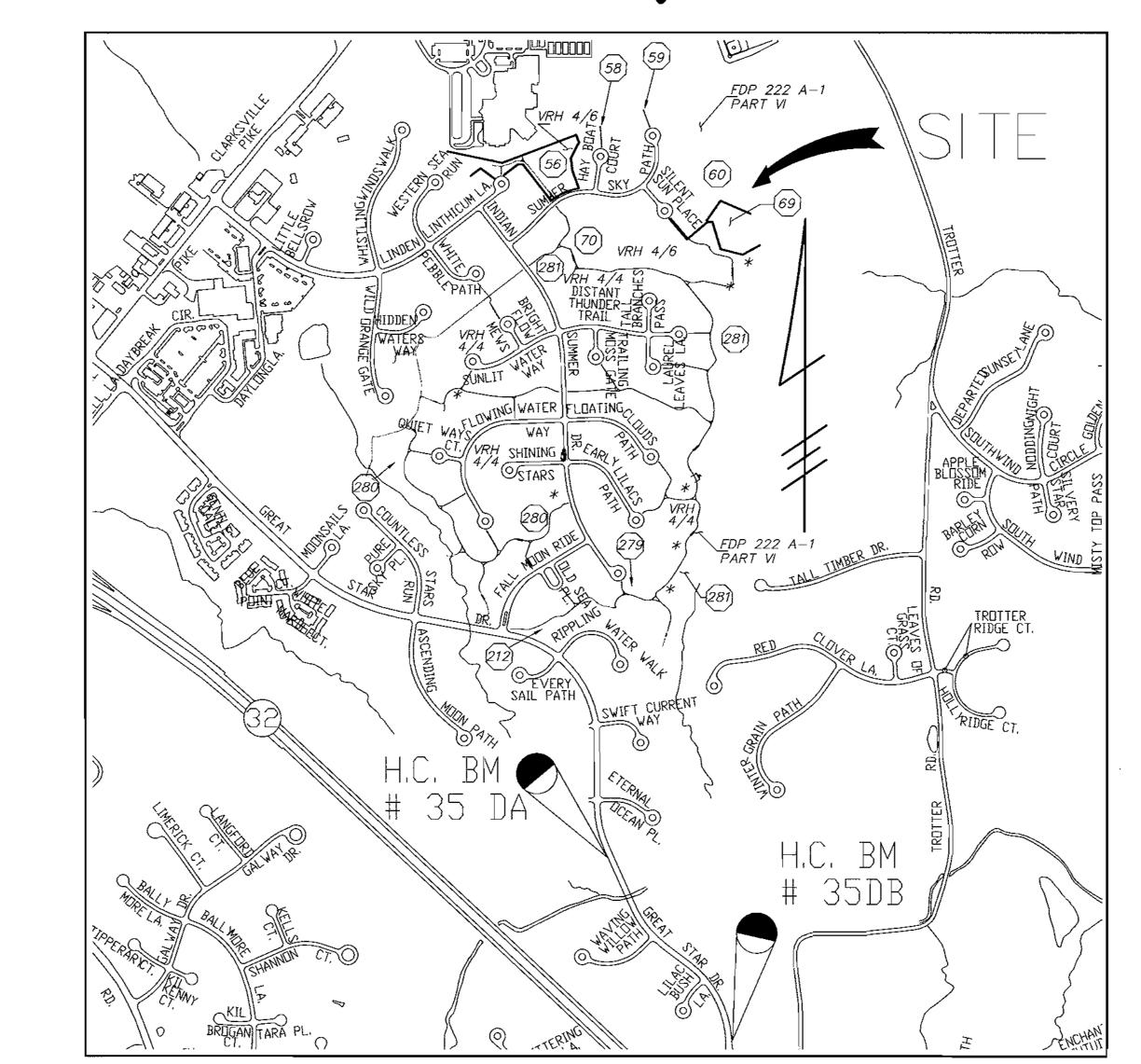
	SHEET INDEX
NO.	DESCRIPTION
î	COVER SHEET
2	PATHWAY PLAN I
3	PATHWAY PLAN II
4	SITE DETAILS
5	SEDIMENT CONTROL NOTES AND DETAILS

VILLAGE OF RIVER HILL PHEASANT RIDGE PATHWAY CONNECTOR

5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



SCALE: 1'' = 600'

= OPEN SPACE LOT NUMBER (TYP.)

= EX. STORM WATER MANAGEMENT FACILITY

BM #35DA ELEV. 351.590 ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 2.1' BEHIND FACE OF CURB ON WEST SIDE OF GREAT STAR DRIVE, 420'+/- SOUTH OF TIDES TERRACE AND 1.6' NORTH OF A STORM DRAIN INLET NORTHING 558918.643 EASTING 1333137.324

BM #35DB ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 7.3' BEHIND FACE OF CURB ON EAST SIDE OF GREAT STAR DRIVE, AND 46.9' NORTH OF LIGHT POLE AT INTERSECTION OF SUMMER SUNRISE DRIVE NORTHING 557696.168 EASTING 1333974.579

9311 0.2138 279 532324 12.2204 280 222 A-1 PART VI F-98-120 1112295 25.5348 281 100025 2.2963 P/0.56 P/0.56 2927 0.0672 58 222 A-1 PART VI F-98-37 2539 0.0583 59 59 256661 5.8921 60 60	SWOKIL ILLI		LOI	1 101	l l
532324 12.2204 280 222 A-1 PART VI F-98-120 1112295 25.5348 281 100025 2.2963 P/O 56 2927 0.0672 58 222 A-1 PART VI F-98-37 2539 0.0583 59 256661 5.8921 60 60	53799	1.2351	212	222 A-1 PART VI	F-96-130
1112295 25.5348 281 100025 2.2963 P/O 56 2927 0.0672 58 222 A-1 PART VI F-98-37 2539 0.0583 59 256661 5.8921 60	9311	0.2138	279		
100025	532324	12.2204	280	222 A-1 PART VI	F-98-120
2927 0.0672 58 222 A-1 PART VI F-98-37 2539 0.0583 59 256661 5.8921 60	1112295	25.5348	281		
2539 0.0583 59 256661 5.8921 60	100025	2.2963	P/O 56		
256661 5.8921 60	2927	0.0672	58	222 A-1 PART VI	F-98-37
	2539	0.0583	59		
83149 1.4088 69 222 A-1 PART VI F-00-09	256661	5.8921	60	_	
	83149	1.4088	69	222 A-1 PART VI	F-00-09
415763 9.5446 70	415763	9.5446	70		

58.9714 AC. 58.9714 AC OR 2,568,793 S.F. PEDESTRIAN PATHWAYS 4.32 AC. OR 188,185 S.F. O SPACES 0 SPACES Date Revision Description OWNER/DEVELOPER THE COLUMBIA ASSOCIATION

ATTN: DENIS ELLIS

10221 WINCOPIN CIRCLE SUITE 100 COLUMBIA MARYLAND 21044-3410 (410) 381-0383

PREPARED BY: **APPROVED** PLANNING BOARD of HOWARD COUNTY

PHOENIX ENGINEERING, INC. CONSULTING ENGINEERS 813 MAIDEN CHOICE LANE, SUITE 300 BALTIMORE, MARYLAND 21228 (410) 247-8833 FAX 247-9397

COLUMBIA - VILLAGE OF RIVER HILL

SECTION 4 AREA 6 OPEN SPACE LOTS 56,58,59,60,69,&70 SECTION 4 AREA 4 OPEN SPACE LOTS 212,279,280,& 281 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

COVER SHEET

у	R.J.W.	Scale AS SHOWN	Proj No 00-006
У	R.H.D.	Date MAY 21, 2001	DRAWING NO TIOTPRP
y	J.R.H.	SDP - 01-21	1 OF

I. TOPOGRAPHY SHOWN ON THESE DRAWINGS ARE BASED ON: ROAD PLANS (F-96-130, F- 98-37) AND ON HOWARD COUNTY TOPOGRAPHY. THE INFORMATION SHOWN OR NOT SHOWN HEREON DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROPER COMPLETION OF GRADING.

ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS AND SPECIFICATIONS

SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND MAINTAIN MINIMUM COVER IN ACCORDANCE

(AS PER BGE REQUIREMENTS)

THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL SUPPLEMENT UTILITY MARKINGS WITH THOSE OF A PRIVATE COMPANY HIRED AND PAID FOR BY THE CONTRACTOR TO INSURE THAT ALL EXISTING UTILITIES ARE

FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR

ALL PROPOSED IMPROVEMENTS WILL BE MAINTAINED BY THE COLUMBIA ASSOCIATION.

9. A FEE SHALL BE PAID IN LIEU OF STORMWATER MANAGEMENT IN THE AMOUNT OF \$14,432.00 FOR THIS PROJECT.

10. THE CONTRACTOR SHALL CONTACT THE BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 48 HOURS IN ADVANCE OF

11. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STAKE OUT ALL CONSTRUCTION AND VERIFY ALL OFFSETS, SETBACKS, EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL) AND DIMENSIONS.

THE PAVEMENT DETAIL SHOWN ON THESE PLANS (3" BITUMINOUS SURFACE COURSE OVER 4" CRUSHED AGGREGATE BASE) IS NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. ANY PAVEMENT SECTION DETERMINED BY THE GEOTECHNICAL ENGINEER THAT IS LESS THAN THE HOWARD COUNTY MINIMUM STANDARD SHALL FIRST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. THE TESTING AND GEOTECHNICAL ENGINEER SHALL

13. ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION TO 95% MAXIMUM STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT DETWEEN O AND 3% OF OPTIMUM AS DETERMINED BY ASTM-D-698. FILL UNDER PAVED AREAS, SHALL BE COMPACTED TO 98% MAXIMUM STANDARD PROCTOR DENSITY

14. ALL TREES 12" IN DIAMETER OR GREATER SHALL REMAIN PROTECTED AND UNDAMAGED AT ALL TIMES UNLESS OTHERWISE INDICATED. THE CONTRACTOR WILL ATTEMPT TO PROTECT ALL OTHER TREES THROUGH FIELD ADJUSTMENTS TO THE LAYOUT.

15. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, OR RIGHTS-OF-WAYS THAT MAY BE REQUIRED TO COMPLETE THE

16. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND SAFETY PRECAUTIONS AND PROGRAMS.

17. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN SEDIMENT AND EROSION CONTROL MEASURES AND NOTIFY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410) 313- 1855.

18. ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE HOWARD COUNTY CONSTRUCTION AND INSPECTION DIVISION PRIOR TO

19. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND STANDARDS.

20. ALL ROADS SHOWN ON THESE PLANS ARE PUBLIC ROADS.

21. A PERMIT APPLICATION TO ALLOW CONSTRUCTION IN WETLANDS, WETLAND BUFFERS, WATERWAYS, AND FLOODPLAINS IS UNDER REVIEW BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT. THE TRACKING NUMBER IS 00-NT-0435/200067166 THIS PERMIT WILL BE GIVEN TO HOWARD COUNTY WHEN RECEIVED.

22. THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS BECAUSE IT IS PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.

23. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY WHITMAN REQUARDT AND ASSOCIATES, DATED 12/94, AND WAS APPROVED ON 1/20/95. 24. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY EXPLORATION RESEARCH AND ASSOCIATES AND WAS APPROVED ON 1/20/95.

25. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.

26. THIS PLAN IS SUBJECT TO WP 01-86 WHICH WAIVES SECTIONS 16.116(a)(1) AND 16.116(a)(2)(ii) RESPECTIVELY PROHIBITING GRADING OR REMOVAL OF VEGETATIVE COVER WITHIN 25 FEET OF A WETLANDS AND WITHIN 75 FEET OF A PERINNIAL STREAM OFF OF EARLY LILACS PATH.

> ADDRESS CHART LOT No. STREET ADDRESS OS LOT 281 5857 INDIAN SUMMER DRIVE PARCEL : OS LOTS 56.58.59 VILLAGE OF RIVER HILL 4/4 & 4/6 60,69,70,212,279,280 & 28 ZONE TAX/ZONE ELEC. DIST. CENSUS BLOCK 13285~90 14014~19 1 & 7 NT-OS MAP 35 5TH 6055 JOHN R. HEINRICHS SEWER CODE WATER CODE Professional Engr. No. 14920

SITE ANALYSIS

TOTAL AREA OF OPEN SPACE LOTS

LENGTH OF BOARDWALKS & BRIDGES:

TOTAL AREA OF THIS SUBMISSION

ZONING: NT-OS

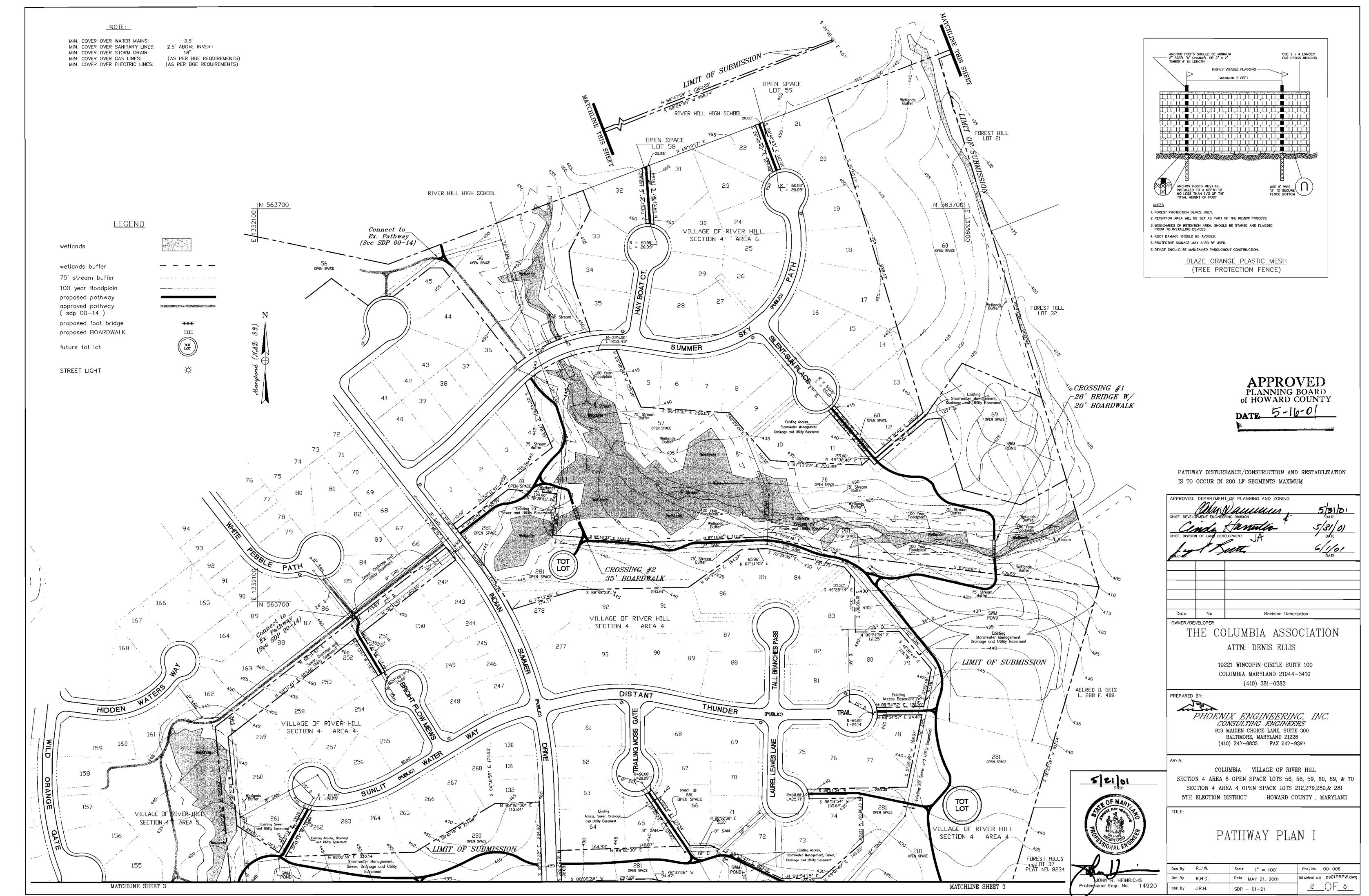
PROPOSED USE:

LENGTH OF PATHWAYS:

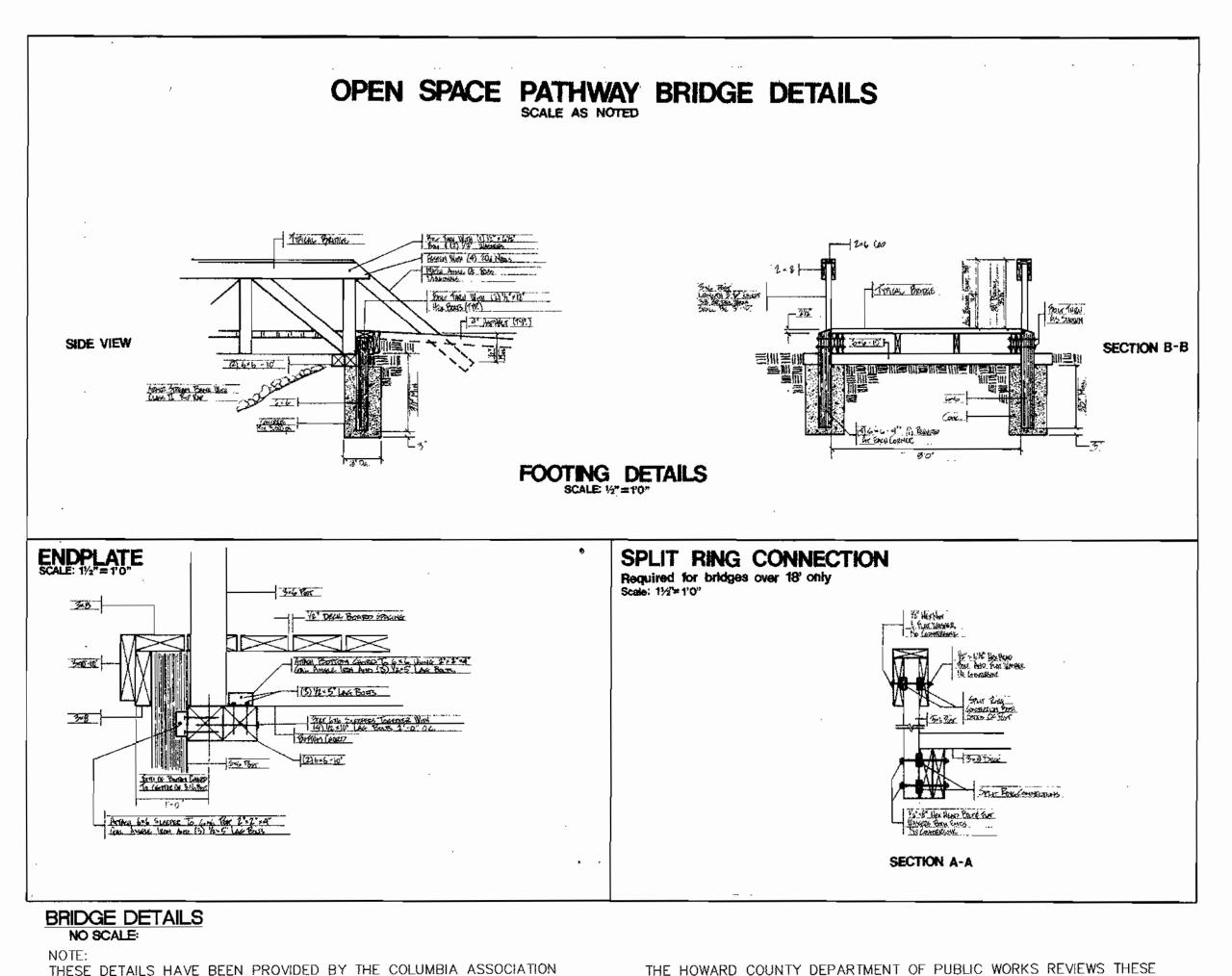
PARKING REQUIRED:

PARKING PROVIDED:

TOTAL LIMIT OF DISTURBANCE:



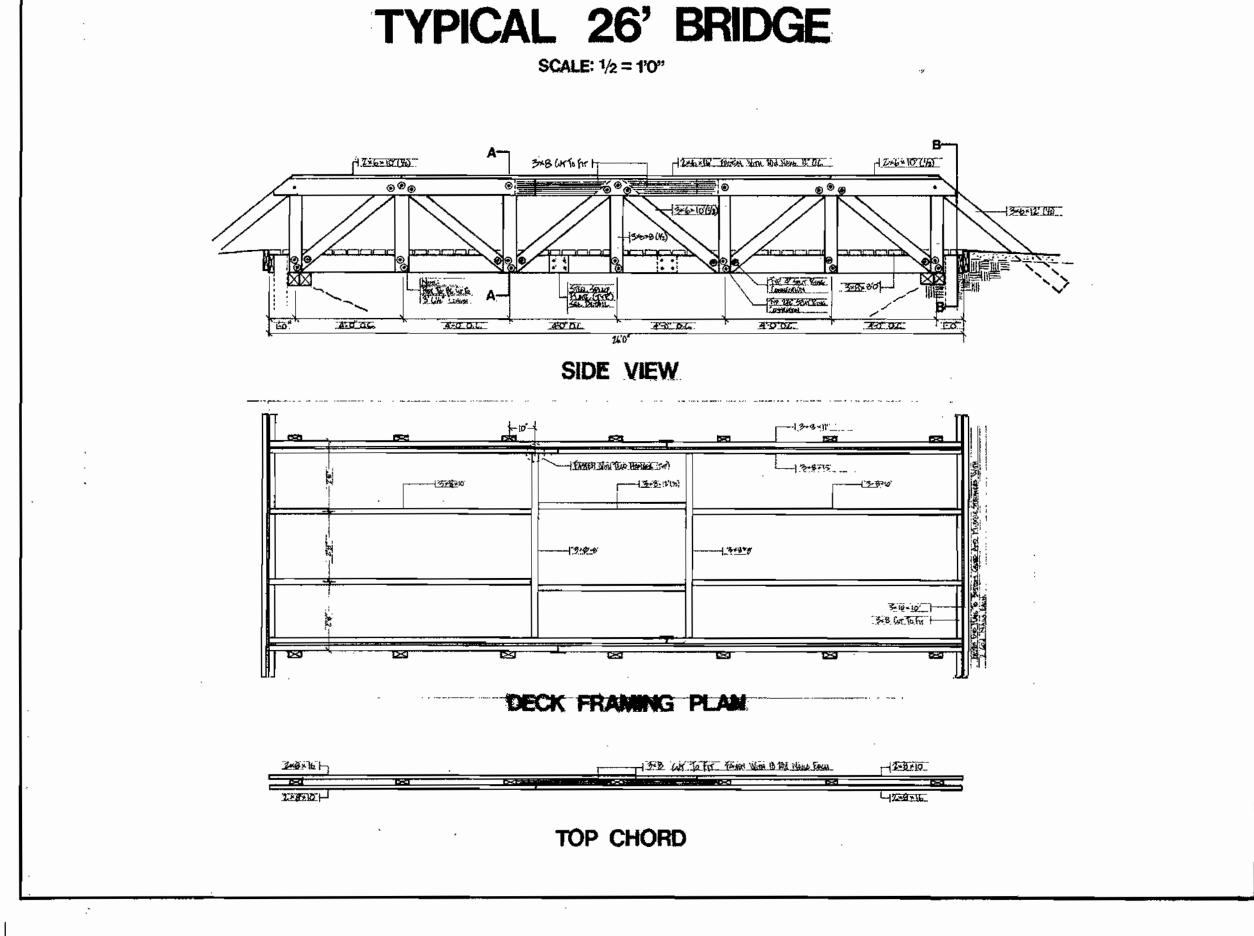
SP-01-21

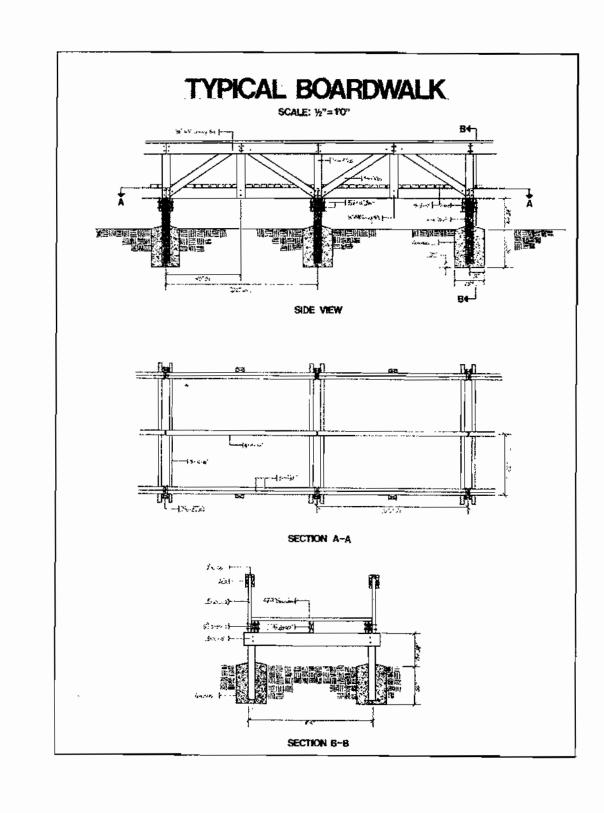


BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY.

REVIEW IN THE BUILDING PERMIT PROCESS.

THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL



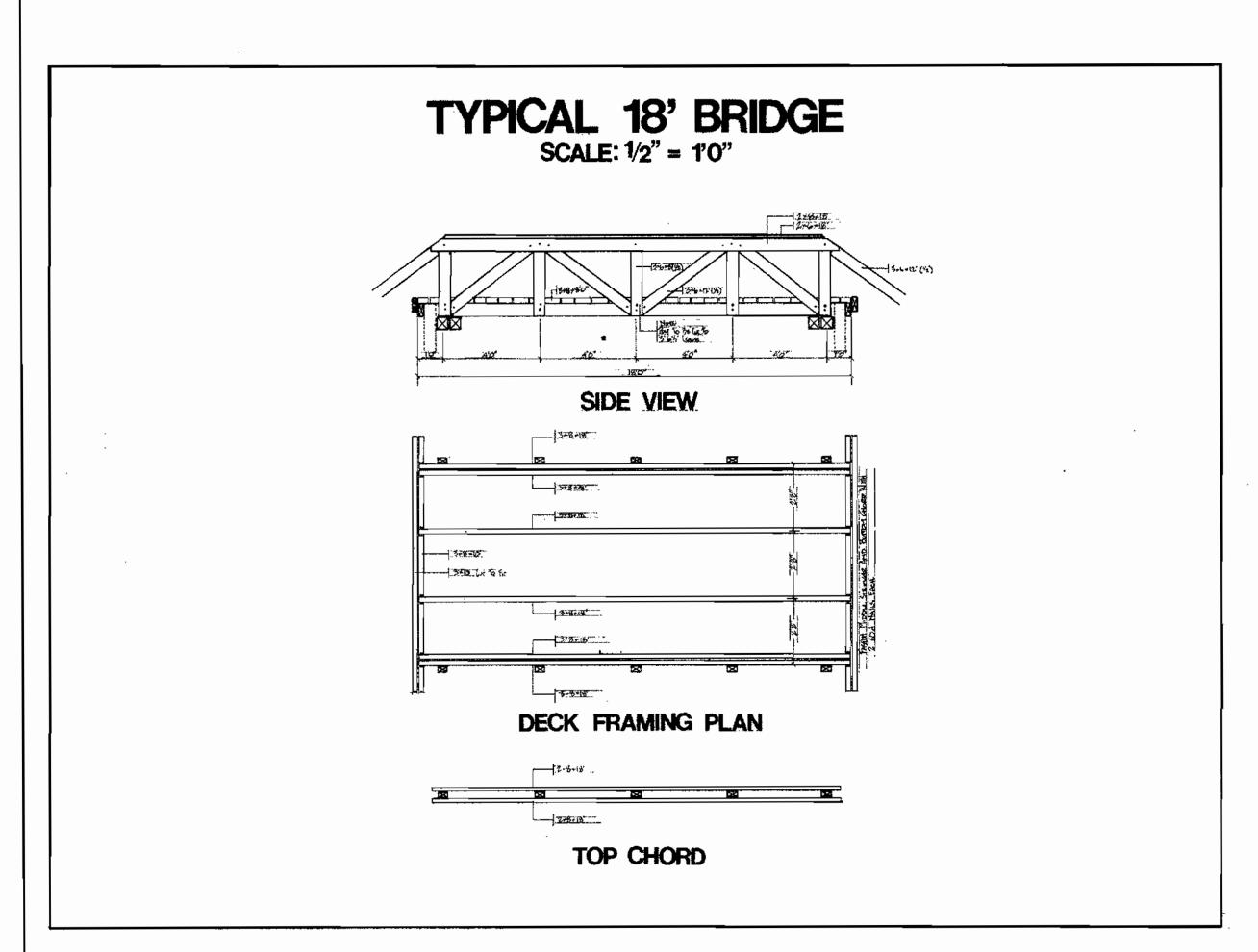


BOARDWALK DETAILS NO SCALE:

ASSOCIATION.

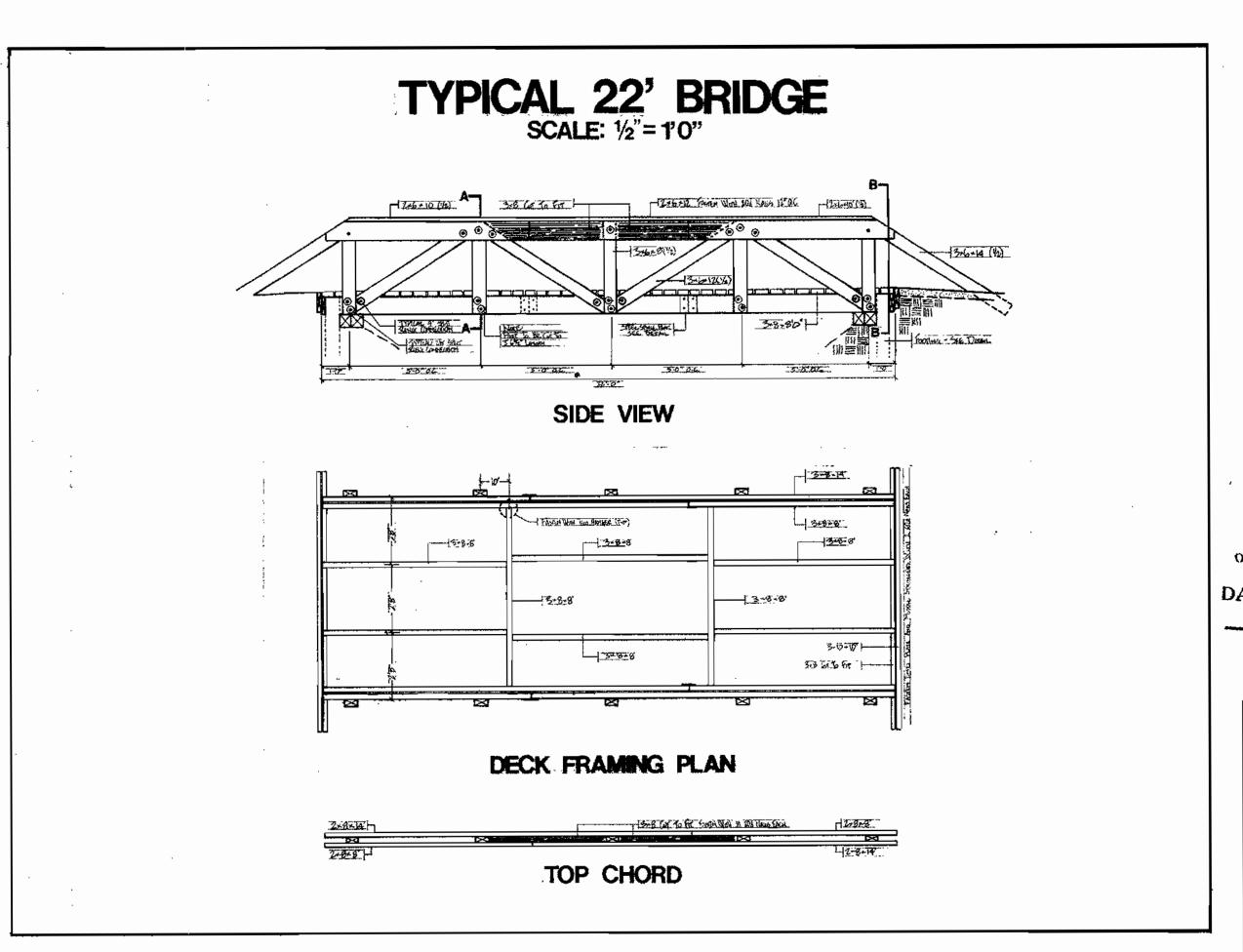
NOTE:
THESE DETAILS HAVE BEEN PROVIDED BY THE COLUMBIA ASSOCIATION
AND ARE GENERIC IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS
TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA

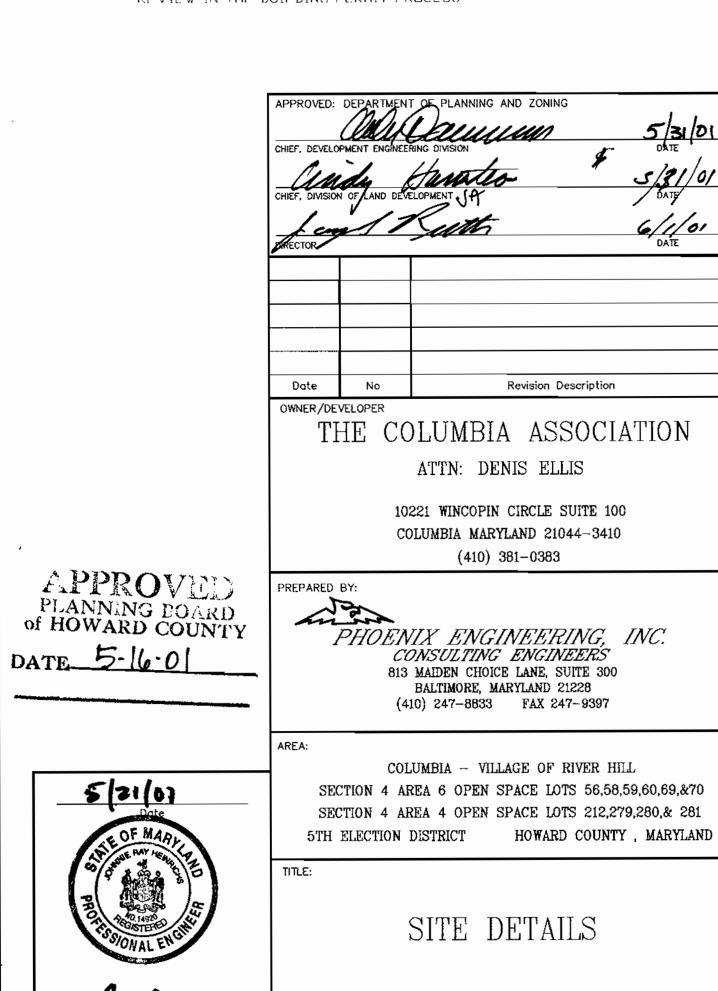
THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS REVIEWS THESE BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL REVIEW IN THE BUILDING PERMIT PROCESS



AND ARE GENERIC IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS

TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA





DP.0(.21

Table 25 Permanent Seeding For Low Maintenance Areas

MIX	SEED MIX (USE CERTIFIED MATERIAL	PLANT RATE	ING	SITE CONDITIONS	USDA HARDI-		RECOM	MENDE	ED PLA	NTING	DATES		N O T
	IF AVAILABLE)	LBS/AC	L8S/1000 SQ FT.		NESS ZONES	3/1- 5/15	3/15 6/1	5/16 8/14	6/2- 7/31	8/1- 10/1	8/15- 10/15	8/15- 11/15	E
1.	TALL FESCUE (75%)	150	3.4	MOIST TO DRY	5b		X			Х			A
	CANADA BLUEGRASS (10%)				6a		Х			Х			
	KENTUCKY BLUEGRASS (10%) REDTOP (5%)				6b	x					X		
	, ,				7a	X		·				X	
					7b	X						Х]
2.	KENTUCKY BLUEGRASS (50%)		3.4	MOIST TO	5ь		Х			х			В
	CREEPING RED FESCUE OR A HARD FESCUE (40%)			MODERATELY DRY TO DRY	6 a		х			х]
	REDTOP (10%)				6Ь	Х					Х		1
3.	TALL FESCUE (85%)	125	2.9	MOIST TO	5b		Х			Х			С
0.	PERENNIAL RYEGRASS (10%)	15	.34	DRY	6a		Х			Х			
	KENTUCKY BLUEGRASS (5%)	125	.23		6b	X					Х		
					7a	Х						Х	
					7b	X						Х	
4.	RED FESCUE OR	60	.92	MOIST TO	5b		х			х			D
	CHEWINGS FESCUE (80%) PERENNIAL RYEGRASS (20%)	60 15	.92 .34	DRY	6a		Х			х			
	TENERAL INTEGRACO (2000)	13	.54		6b	Х					Х		
5.	TALL FESCUE (85%) OR	110	2.5	MOIST TO	5b		Х			Х			E
	PERENNIAL RYÈGRASS (50%) PLUS CROWNVETCH OR	20 20	.46 .46	DRY	6a		Х			х			
	FLATPEA	20	.46		6b	Х					Х		
					7a	х						Х	
					7ь	Х						Х	
6.	WEEPING LOVEGRASS (17%)	4	.09 .46	DRY TO VERY DRY	6а	X		Х					F
	SERECIA LESPEDEZA (83%)	20	.40	<i>D</i> (()	7a	×		X					
					7ь	X		Х					

- NOTES: A/ USED BY SHA ON SLOPED AREAS. ADD A LEGUME FOR SLOPES > THAN 3:1.
 - B/ USED IN MEDIAN AREAS BY SHA. SHADE TOLERANT. C/ POPULAR MIX - PRODUCES PERMANENT GROUND COVER QUICKLY. BLUEGRASS THICKENS STAND.
 - D/ BEST USE ON SHADY SLOPES, NOT ON POORLY DRAINED CLAYS.
 - E/ USE ON LOW MAINTENANCE, STEEP SLOPES. USE TALL FESCUE IN DRAUGHTY COND. CROWN VETCH BEST FOR 56, 66, 66. F/ SUITABLE FOR SEEDING IN MID - SUMMER.

Table 25 Permanent Seeding For Low Maintenance Areas (Cont'd)

MIX	SEED MIX (USE CERTIFIED MATERIAL	PLANT RATE	ING	SITE CONDITIONS	USDA HARDI-		RECOM	MEND	ED PLA	ANTING	DATES		
	IF AVA!LABLE)	LBS/AC	LBS/1000 SQ FT.		NESS ZONES	3/1- 5/15	3/15- 6/1	5/16- 8/14	6/2 7/31	8/1 10/1	8/15- 10/15	8/15 11/15	ΙĖ
7.	TALL FESCUE (83%)	110	2.5	DRY TO VERY	5b		Х		Х	Х			0
	WEEPING LOVEGRASS (2%)	3 20	.07 .46	DRY	6a		X		Х	Х			
	SERECIA LESPEDEZA (15%)	20	.40		6b	X		Х			x		
					7a	X		X				Х	
					7ь	X		X				X	
8.	REED CANARYGRASS (75%)	40	.92	WET TO	5b		X			Х			
	REDTOP (6%) PLUS BIRDSFOOT TREEFOIL (19%)	3 10	.07	MODERATELY DRY	6a		X			Х			
					6b	Х					Х]
					7a	X						x	
					7b	Х						x	
9.	TALL FESCUE (86%)	125	2.9	WET TO	5b		X			Х			J
	POA TRIVIALIS (7%)	10	.23	MODERATELY DRY	6a		Х			Х			
	BIRDSFOOT TREEFOIL (7%)	10	.23	DKT	6b	Х					X		
10.	TALL FESCUE (80%)	120	3.4	WET TO DRY	5b		X			Х			
	HARD FESCUE (20%)	30	.69		6a		X			Х			
					6ь	Х					Х		
					7a	×						×	
					7ь	X						х	
11.	HARD FESCUE (100%)	75	1.7	MOIST TO	5b		Х			Х			Ī
				DRY	6a		Х			Х			
					6Ь	х					Х]
					7a	X						Х	1

G/ WEEPING LOVEGRASS MAY BE SEEDED WITH TALL FESCUE IN MID-SUMMER. SERECIA LESPEDEZA IS BEST SUITED FOR ZONES 70 AND 7b. H/ USE ON POORLY DRAINED SOILS - DITCHES OR WATERWAYS. BIRDSFOOT TREEFOILIS BEST FOR ZONES 56, 6a, ABOVE 2000 FT. I/ USE IN AREAS OF MOIST SHADE. POA TRIVIALIS THRIVES IN WET SHADY AREAS.

J/ TALL FESCUE MAY 8E SEEDED ALONE. THE HARD FESCUE PROVIDES BETTER SHADE TOLERANCE AND PRODUCES A BETTER STAND. K/ LOW FERTILITY GRASS. REQUIRES INFREQUENT MOWING. GOOD COMPANION FOR WILDFLOWERS.

Permanent Seeding Summary

			, o, manone oo	cang bannary				
	Seed Mixt	ture (Hardiness From Table 25			Fe (Lime Rate		
No.	Species	Application Rate (Ib/ac)	Seeding Dates	Seeding Depths	N	P205	K20	,,,,,
	TALL FESCUE PERENNIAL RYGRASS KENTUCKY BLUEGRASS	126.32 14.81 10.02	3/1~5/15	1/4"	(2.0 lb/	(4.0 lb/	175 ib/ac (4.0 lb/ 1000 sf)	2 tons/ac (100 lb/ 1000 sf)

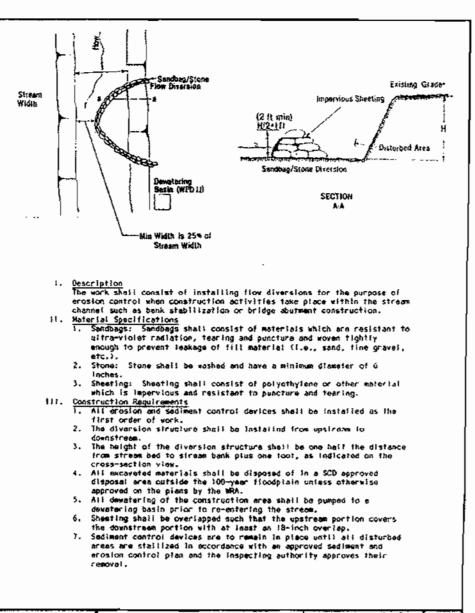
Section III: Permanent Seeding

Seeding grass an legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

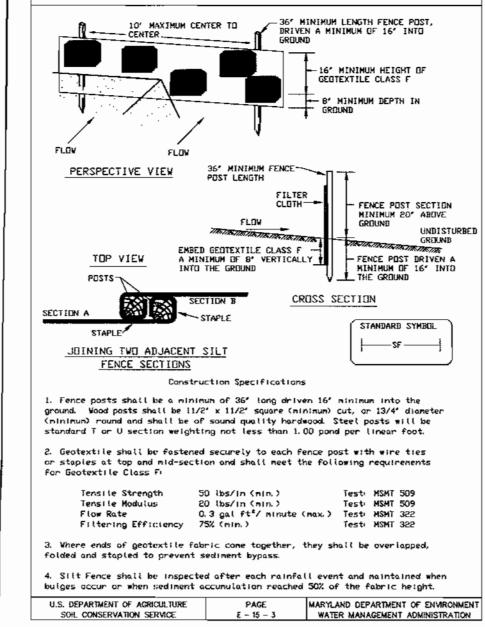
A. Seed Mixtures - Permanent Seeding

- i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.
- ii. For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
- iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed

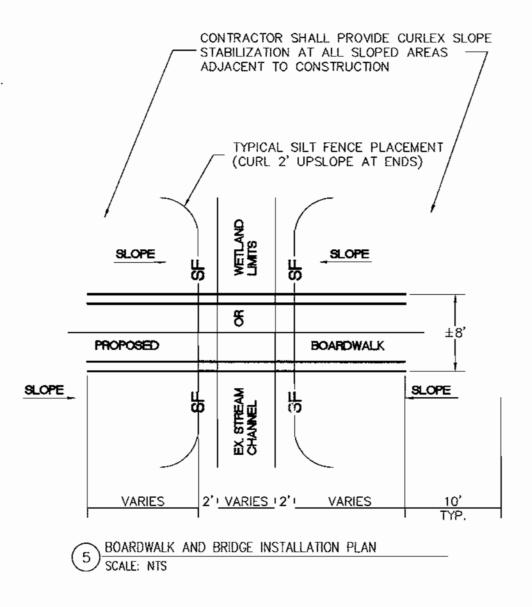
G-20-9



1/24/84 WPD



DETAIL 22 - SILT FENCE



WATER RESOURCES

ADMINISTRATION

	SILT FENCE	
	Silt Fence Design Cr	iteria
	(Max I mum)	(Maxinum)
Stope Steepness	Slope Length	Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50 1 to 10 1	125 feet	1,000 feet
10: i 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
unlinited. In these ar required.	eas a silt fence may b	e the only perimeter control
U.S. DEPARTMENT OF AGRICULTURE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT

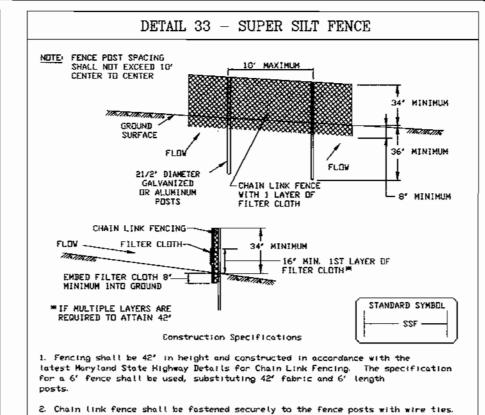
SOIL CONSERVATION SERVICE E - 15 - JA WATER MANAGEMENT ADMINISTRATION Table 26 Temporary Seeding Rates, Depths, and Dates

SPECIES	MINIMUM SEEDII	NG RATES	PLANTING		HAF	RDINESS	S ZONE	ES"AND	SEED	ING DA	TES**	
3, 20,23	WIITENOW SEEDIN	NO NAICS	DEPTH*	70	and	7b		6b		60	and	5b
	PER ACRE	LBS/1000 SQ. FT.	INCHES						8/15- 11/15			
CHOOSE ONE: BARLEY OATS RYE 39	2.5 BU. (122 lbs) 3 BU. (96 lbs) 2.5 BU. (140 lbs)	2.21	1-2 1-2 1-2	X X X	_ _ _	BY 10/15 - X	X X X	_ _ _	BY 10/15 - X	X X X	- - -	BY 10/1 - X
BARLEY OR RYE PLUS FOXTAIL MILLET*	150 lbs.	3.45	1	X	X	10/15 X	×	X	10/15 X	X	X	10/1 X
WEEPING LOVEGRASS"	4 lbs.	.09	1/4-1/2	-	X	_		Х	-	_	Х	-
ANNUAL RYEGRASS	50 lbs.	1.15	1/4-1/2	Х		11/1	X	-	11/1	Х		8/15
MILLET ⁴²	50 lbs.	1.15	1/2		X	_	_	Х	-	-	Х	-

- 36. Applicable on slopes of 3:1 or flatter
- Refer to figure A Adopted from USDA, ARS Miscellaneous Publication #1475, January 1990
- 38. Between fall and spring seeding dates, use mulch only if ground is frozen and reseed when thowed. 39. May be used as a nurse crop for late fall/early winter permanent seedings, add 56 lbs./ac to the permanent seeding mixture.
- 40. Maryland State Highway Administration Temporary Seed Mix.
- 41. May be used as a nurse crop for mid-summer permanent seedings. Add 2 lbs/ac to permanent seed mix. 42. May be used as a nurse crop for mid-summer permanent seedings. Add 10 lbs/ac to the permanent seed mix.

Table 24 Maintenance Fertilization for Permanent Seedings

	Use Soil	Test R	Results or	Rates Shown Below	
Seeding Mixture	Туре	lb/ac	lb/1000 sf	Time	Mowing
Tall fescue makes up 70% or more of cover	10-10-10 or 30-10-10		11.5 9.2	Yearly as needed. Fall	Not closer than 3" if occasional mowing is desired
Crownvetch Sericea Lespedeza Birdsfoot Trefoil	0-20-0	400	9.2	Spring, the year following establishment and every 4—5 years thereafter	Do not mow crownvetch
Fairly uniform stand of tall fescue and sericea lespedeza, or birdsfoot trefoil	5-10-10	500	11.5	Fall, the year following establishment and every 4—5 years thereafter	Not required, no clos e 1.5han 4" in the fall after seed has matured.
Weeping lovegrass & sericea lespedeza fairly uniform plant distribution.	5-10-10	500	11.5	Spring, the year following establishment and every 3—4 years thereafter.	Not required, no closer than 4" in the fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures	20-10-10	250 100	5.8 2.3	September, 30 days later. December, May20, June 30, if needed.	Mow no closer than 2" for red fescue and K. bluegrass, 3" for fescue.



The lower tension wire, brace and truss rods, drive anchors and post caps are not 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

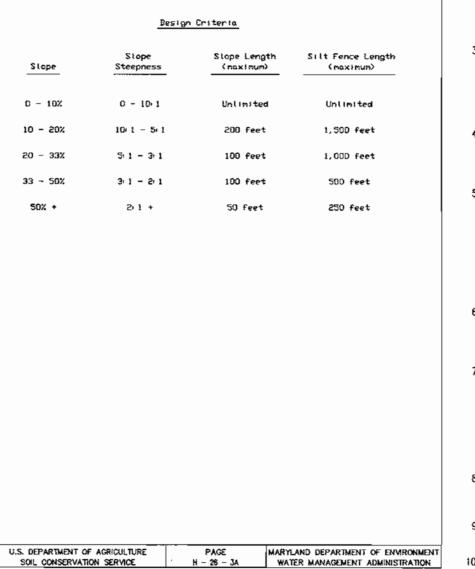
5. Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class Fi

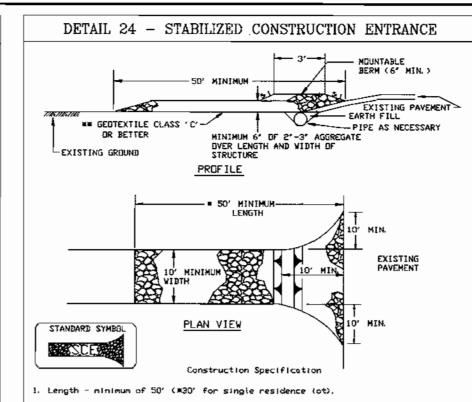
Tensile Strength Testi MSMT 509 Tensile Modulus 20 (bs/in (min.) Test: MSMT 509 Flow Rate 0.3 gal/ft*/minute (max.) Test: MSMT 322 Filtering Efficiency 75% (min.)

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION U.S. DEPARTMENT OF AGRICULTURE

SUPER SHIT FENCE

	<u>Beslar</u>	Criteria	
Slope	Stope Steepness	Slope Length (naxinum)	Silt Fence Length (maximum)
- 10Z	0 - 10-1	Unlimited	Unlimited
0 - 20%	10:1 - 5:1	200 feet	1,500 feet
0 - 33%	51 1 - 31 1	100 feet	1,00D feet
3 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	201 +	50 feet	250 feet





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

2. Width - 10' minimum, should be flared at the existing road to provide a turning

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

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 bern with 5:1 slopes and a ninimum of 6' of stone over the pipe. Pipe ha 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 conveved. A 6' minimum will be required

6. 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 SOIL CONSERVATION SERVICE

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION, (410-313-2455)

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 1994 WARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, 8) 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 SEEDINGS SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52.) TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTAB-LISHMENT OF GRASSES.

6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM

THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 7) SITE ANALYSIS: TOTAL AREA OF SITE 58.97 ACRES

AREA DISTURBED 4.32 ACRES

AREA TO BE ROOFED OR PAVED 2.10 ACRES = 91580 SF

AREA TO BE VEGETATIVELY STABILIZED 2.22 ACRES

TOTAL CLIT 339 CU. YDS. TOTAL FILL OFFSITE WASTE/BORROW AREA LOCATION

8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE

REPAIRED ON THE SAME DAY OF DISTURBANCE

9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR

APPROVED
PLANNING BOARD

of HOWARD COUNTY

JOHN R. HEINRICHS

rofessional Engr. No. 14920

DATE 5-16-0

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.

PERMANENT SEEDING NOTES

OR DISC INTO UPPER THREE INCHES OF SOIL.

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, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES: 1) PREFERRED -- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQUARE FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE

30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT.) 2) ACCEPTABLE -- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTÚCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING -- APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ACHORING. MAINTENANCE -- INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15. SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING. REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH

"!/WE 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 COUNTY SOIL CONSERVATION DISTRICT. "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED II THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC CN-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT." Xey On 5.21.01 DÉVÉLOPER: DENIS ELLIS COLUMBIA ASSOCIATION THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. APPROVED: DEPARTMENT OF PLANNING AND ZONING

SEQUENCE OF CONSTRUCTION

steps for each phase of construction:

Stake out pathway - 2-3 Days.

of the Environment.

Obtain a grading permit and all other necessary permits — 1 Day.

Permits at least 48 hours before beginning any work. Determine

All work in nontidal wetlands, wetland buffers, waterways and 100

Management Practices given on this sheet and with the Letter of

Authorization for this project issued by the Maryland Department

After the completion of steps 1 & 2 comply with the following

Install silt fence, tree protection fence and other perimeter

is to occur in 200 LF segments maximum. -3-4 Days. Obtain approval from inspector prior to proceeding — 1 Day.

10. Compact subgrade and install aggregate base for pathway - 1

Begin clearing and grubbing for construction — 1 Week.

controls. Pathway disturbance/construction and restabilization

Grade pathway maintaining positive drainage at all times -1-2

Install perimeter controls for bridges and boardwalks. In-stream

detail for Sandbag / Stone diversion on this sheet - 1 Week.

of disturbance. Note see restrictions in the Best Management

Upon stabilization of the site and approval of the Howard County

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS

14. Stabilize all disturbed areas with seed and mulch within 14 days

Sediment Control Inspector, remove sediment and erosion

work for the installation of riprap shall be in accordance with the

stabilized construction entrances and project phasing — 2 Days.

Notify the Howard County Bureau of Licenses, Inspections and

year floodplain shall be in conformance with the Best

Install stabilized construction entrances - 1 Day.

Install bridges and boardwalks - 1-2 Weeks.

Install pathway pavement - 1-2 Weeks.

USDA NATURAL RESOURCES CONSERVATION SERVICES

BY THE ENGINEER:

Practices - 1-2 Weeks.

OWNER/DEVELOPER THE COLUMBIA ASSOCIATION

Revision Description

No

10221 WINCOPIN CIRCLE SUITE 100 COLUMBIA MARYLAND 21044-3410 (410) 381-0383

ATTN: DENIS ELLIS

PREPARED BY: PHOENIX ENGINEERING, INC. CONSULTING ENGINEERS 813 MAIDEN CHOICE LANE, SUITE 300 BALTIMORE, MARYLAND 21228

(410) 247-8833 FAX 247-9397

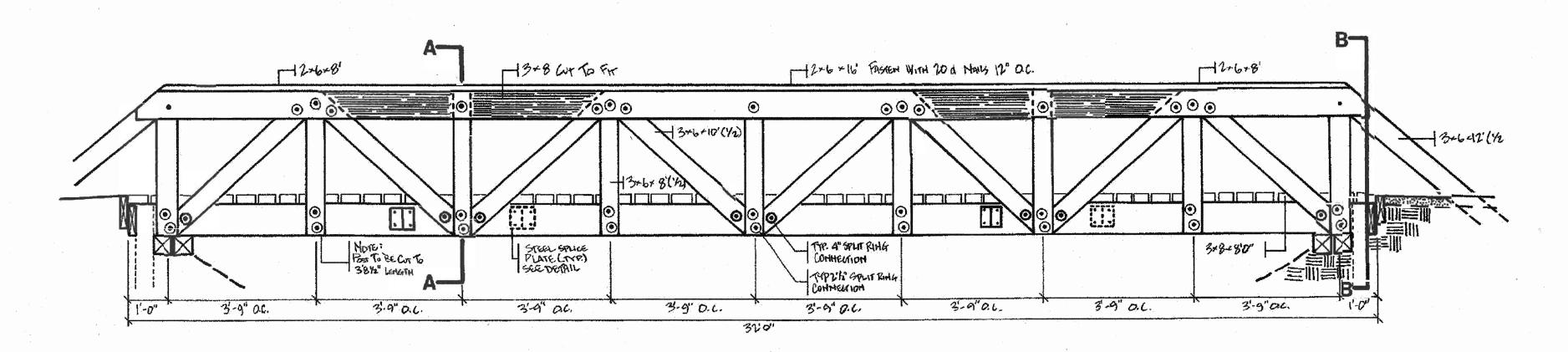
COLUMBIA - VILLAGE OF RIVER HILL SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70

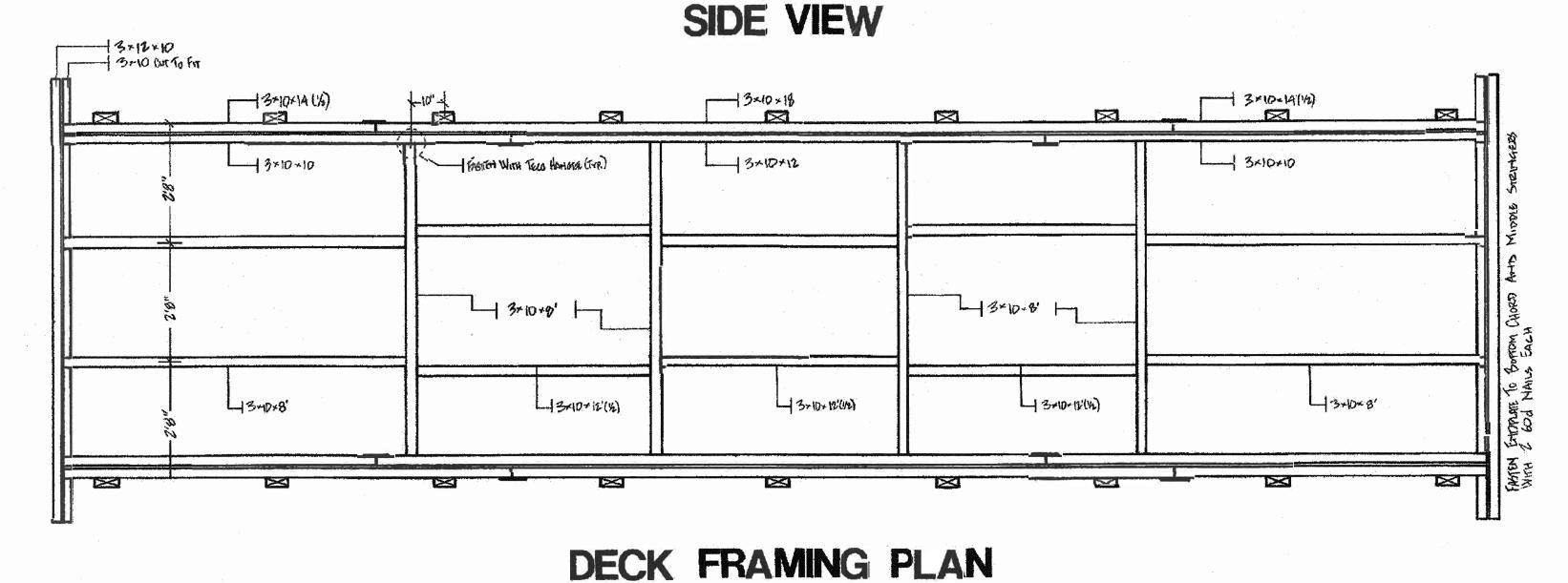
SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280,& 281 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

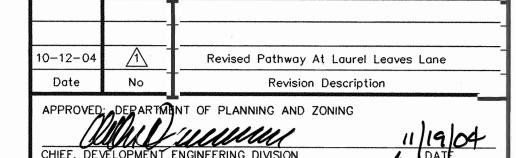
Des By R.J.W. Scale AS SHOWN Proj No 00-006 DRAWING NO De03prpw Dm By R.H.D. Date MAY 21, 2001 Chik By J.R.H.

TYPICAL 32' BRIDGE A SCALE: 1/2" = 1'0"





TOP CHORD



CHIEF, DIVISION OF LAND DEVELOPMENT AND RED

DIRECTOR

OWN ER/DEVELOPER:

THE COLUMBIA ASSOCIATION

10221 WINCOPIN CIRCLE, SUITE 100

COLUME 31A, MARYLAND 21044-3410

ATTN: L'ENIS ELLIS (410) 381-0383

11/24/04 DATE

PHOENIX ENGINEE'RING, INC.

CONSULTING ENGINEERS

1420-A JOH AVENUE

BALTIMORE, MARYLAND 21227

(410) 247-8833 FAX 247-9397

(410) 247-8833 FAX 247-9397

A:

COLUMGIAN-VILLAGE OF RIVER HILL

SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70

SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280, & 281

5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DDbJCE DETA

BRIDGE DETAIL

 Des By
 K.J.W.
 Scale
 AS SHOWN
 Proj No
 04-003

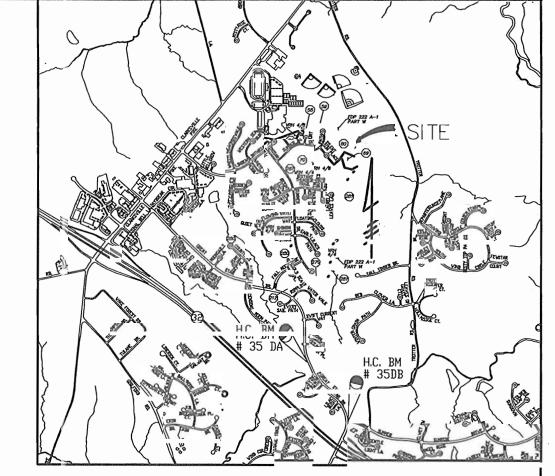
 Drn By
 S.E.W.
 Date
 OCTOBER, 2004
 DRAWING NO

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 JR H
 SDP
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JOHN R. HEINRICHS
Professional Engr. No. 14920

	SHEET INDEX
NO.	DESCRIPTION
1	COVER SHEET
2	PATHWAY PLAN I - REV. SITE DEVELOPMENT PLAN
3	PATHWAY PLAN II
4	SITE DETAILS
5	SEDIMENT CONTROL NOTES AND DETAILS
G	BRIDGE DETAIL

VILLAGE OF RIVER HILL PHEASANT RIDGE PATHWAY CONNECTOR



1. TOPOGRAPHY SHOWN ON THESE DRAWINGS ARE BASED ON: ROAD PLANS (F-96-130, F-98-37) AND ON HOWARD COUNTY TOPOGRAPHY. THE

2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS AND SPECIFICATIONS. 3. DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF PHOENIX ENGINEERING MAY CAUSE THE WORK TO BE

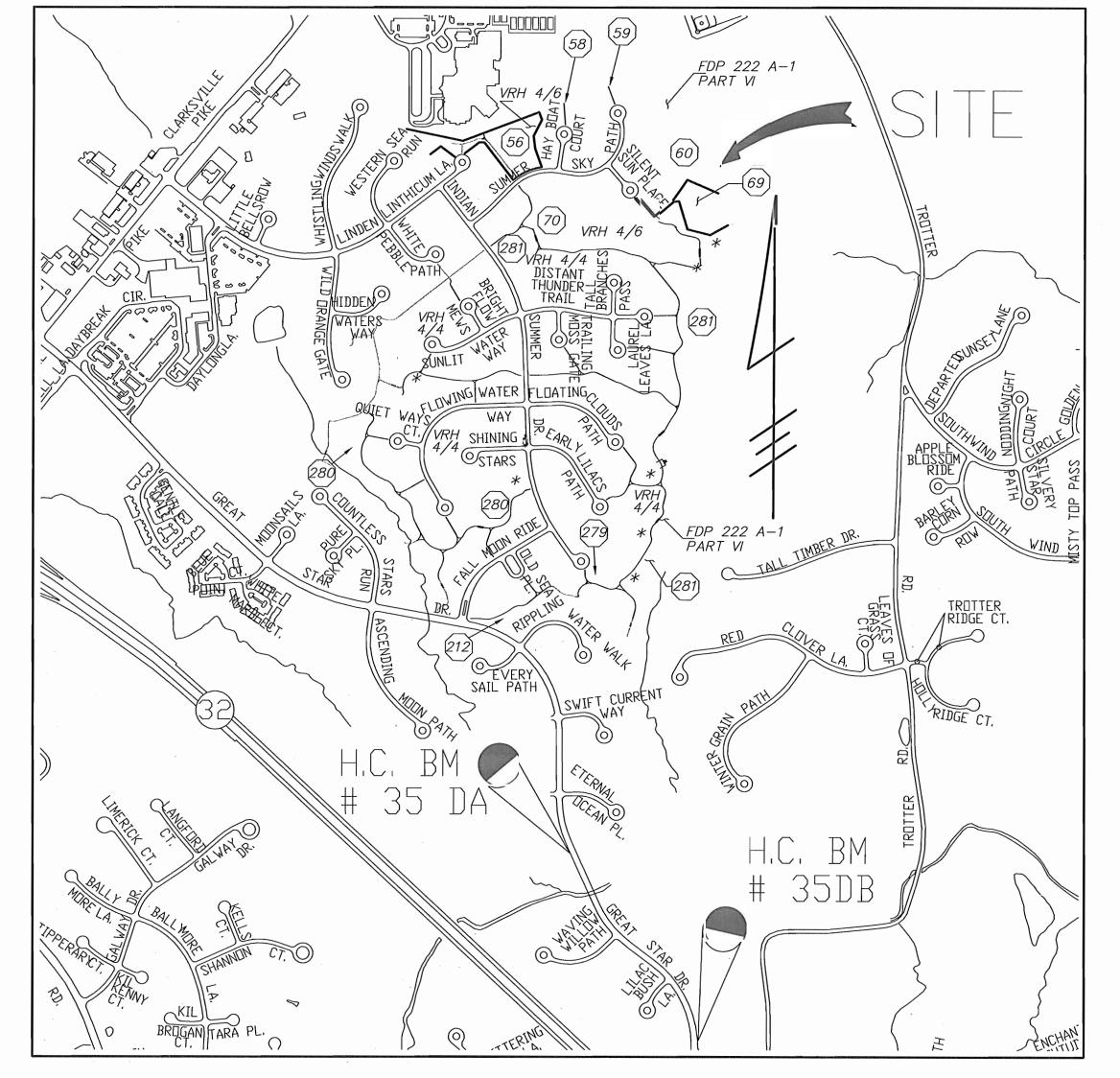
INFORMATION SHOWN OR NOT SHOWN HEREON DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROPER COMPLETION OF GRADING.

- 4. THE LOCATION OF UTILITIES AND UTILITY EASEMENTS SHOWN ON THESE PLANS ARE FROM APPROVED SDP'S AND RECORDED PLATS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO
- 5. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND MAINTAIN MINIMUM COVER IN ACCORDANCE

 - MIN. COVER OVER SANITARY LINES: 2.5' ABOVE INVERT

 - (AS PER BGE REQUIREMENTS)
- 6. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL SUPPLEMENT UTILITY MARKINGS WITH THOSE OF A PRIVATE COMPANY HIRED AND PAID FOR BY THE CONTRACTOR TO INSURE THAT ALL EXISTING UTILITIES ARE CLEARLY MARKED PRIOR TO EXCAVATION.
- 7. FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR
- ALL PROPOSED IMPROVEMENTS WILL BE MAINTAINED BY THE COLUMBIA ASSOCIATION.
- 9. A FEE SHALL BE PAID IN LIEU OF STORMWATER MANAGEMENT IN THE AMOUNT OF \$14,432.00 FOR THIS PROJECT.
- 10. THE CONTRACTOR SHALL CONTACT THE BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 48 HOURS IN ADVANCE OF
- 11. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STAKE OUT ALL CONSTRUCTION AND VERIFY ALL OFFSETS, SETBACKS, EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL) AND DIMENSIONS.
- 12. THE PAVEMENT DETAIL SHOWN ON THESE PLANS (3" BITUMINOUS SURFACE COURSE OVER 4" CRUSHED AGGREGATE BASE) IS NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. ANY PAVEMENT SECTION DETERMINED BY THE GEOTECHNICAL ENGINEER THAT IS LESS THAN THE HOWARD COUNTY MINIMUM STANDARD SHALL FIRST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. THE TESTING AND GEOTECHNICAL ENGINEER SHALL
- 13. ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION TO 95% MAXIMUM STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT DETWEEN O AND 3% OF OPTIMUM AS DETERMINED BY ASTM-D-698. FILL UNDER PAVED AREAS, SHALL BE COMPACTED TO 98% MAXIMUM STANDARD PROCTOR DENSITY PER ASTM-D-698.
- 14. ALL TREES 12" IN DIAMETER OR GREATER SHALL REMAIN PROTECTED AND UNDAMAGED AT ALL TIMES UNLESS OTHERWISE INDICATED. THE CONTRACTOR WLL ATTEMPT TO PROTECT ALL OTHER TREES THROUGH FIELD ADJUSTMENTS TO THE LAYOUT.
- 15. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, OR RIGHTS-OF-WAYS THAT MAY BE REQUIRED TO COMPLETE THE WORK SHOWN HEREON.
- 16. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND SAFETY PRECAUTIONS AND PROGRAMS. 17. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN SEDIMENT AND EROSION CONTROL MEASURES AND NOTIFY THE HOWARD COUNTY DEPARTMENT OF
- INSPECTIONS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410) 313- 1855.
- 18. ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE HOWARD COUNTY CONSTRUCTION AND INSPECTION DIVISION PRIOR TO
- 19. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND STANDARDS.
- 20. ALL ROADS SHOWN ON THESE PLANS ARE PUBLIC ROADS.
- 21. A PERMIT APPLICATION TO ALLOW CONSTRUCTION IN WETLANDS, WETLAND BUFFERS, WATERWAYS, AND FLOODPLAINS IS UNDER REVIEW BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT. THE TRACKING NUMBER IS 00-NT-0435/200067166 THIS PERMIT WILL BE GIVEN TO HOWARD COUNTY WHEN RECEIVED. 22. THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS BECAUSE IT IS PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY
- DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
- 23. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY WHITMAN REQUARDT AND ASSOCIATES, DATED 12/94, AND WAS APPROVED ON 1/20/95. 24. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY EXPLORATION RESEARCH AND ASSOCIATES AND WAS APPROVED ON 1/20/95.
- 25. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- 26. THIS PLAN IS SUBJECT TO WP 01-86 WHICH WAIVES SECTIONS 16.116(a)(1) AND 16.116(a)(2)(ii) RESPECTIVELY PROHIBITING GRADING OR REMOVAL OF VEGETATIVE COVER WITHIN 25 FEET OF A WETLANDS AND WITHIN 75 FÉÉT OF A PERINNIÁL STREAM OFF OF EARLY LILACS PATH.

5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



LOCATION MAP

(212) = OPEN SPACE LOT NUMBER (TYP.)

= EX. STORM WATER MANAGEMENT FACILITY

ELEV. 351.590 ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 2.1' BEHIND FACE OF CURB ON WEST SIDE OF GREAT STAR DRIVE, 420'+/- SOUTH OF TIDES TERRACE AND 1.6' NORTH OF A STORM DRAIN INLET NORTHING 558918.643 EASTING 1333137.324

BM #35DB ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 7.3' BEHIND FACE OF CURB ON EAST SIDE OF GREAT STAR DRIVE, AND 46.9' NORTH OF LIGHT POLE AT INTERSECTION OF SUMMER SUNRISE DRIVE NORTHING 557696.168 EASTING 1333974.579

9311					
3311	0.2138	279			
532324	12.2204	280	222	A-1 PART VI	F-98-120
1112295	25.5348	281			
100025	2.2963	P/0 56			
2927	0.0672	, 58	222	A-1 PART VI	F-98-37
2539	0.0583	59	L _		
256661	5.8921	60			
83149	1.4088	69	222	A-1 PART VI	F-00-09
415763	9.5446	70	1		

SITE ANALYSIS

TOTAL AREA OF OPEN SPACE LOTS TOTAL AREA OF THIS SUBMISSION

ZONING: NT-OS PROPOSED USE:

LENGTH OF PATHWAYS: LENGTH OF BOARDWALKS & BRIDGES: TOTAL LIMIT OF DISTURBANCE:

PARKING REQUIRED: PARKING PROVIDED:

ADDRESS CHART

NT-OS MAP 35

OS LOT 281 5857 INDIAN SUMMER DRIVE

VILLAGE OF RIVER HILL | 4/4 & 4/6

BLOCK

WATER CODE

13285~90 14014~19 1 & 7

STREET ADDRESS

5TH

SEWER CODE

LOT No.

58.9714 AC. 58.9714 AC OR 2,568,793 S.F.

PEDESTRIAN PATHWAYS 14,377 L.F. 14,377 L.F. 14,377 L.F. 4.32 AC. OR 188,185 S.F.

0 SPACES

REVISED PATHWAY AT LAUREL LEAVES LANE Revision Description OWNER/DEVELOPER

THE COLUMBIA ASSOCIATION ATTN: DENIS ELLIS

> 10221 WINCOPIN CIRCLE SUITE 100 COLUMBIA MARYLAND 21044-3410 (410) 381-0383

PLANNING BOARD of HOWARD COUNTY

PHOENIX ENGINEERING, INC. CONSULTING ENGINEERS 813 MAIDEN CHOICE LANE, SUITE 300 BALTIMORE, MARYLAND 21228 (410) 247-8833 FAX 247-9397

PREPARED BY:

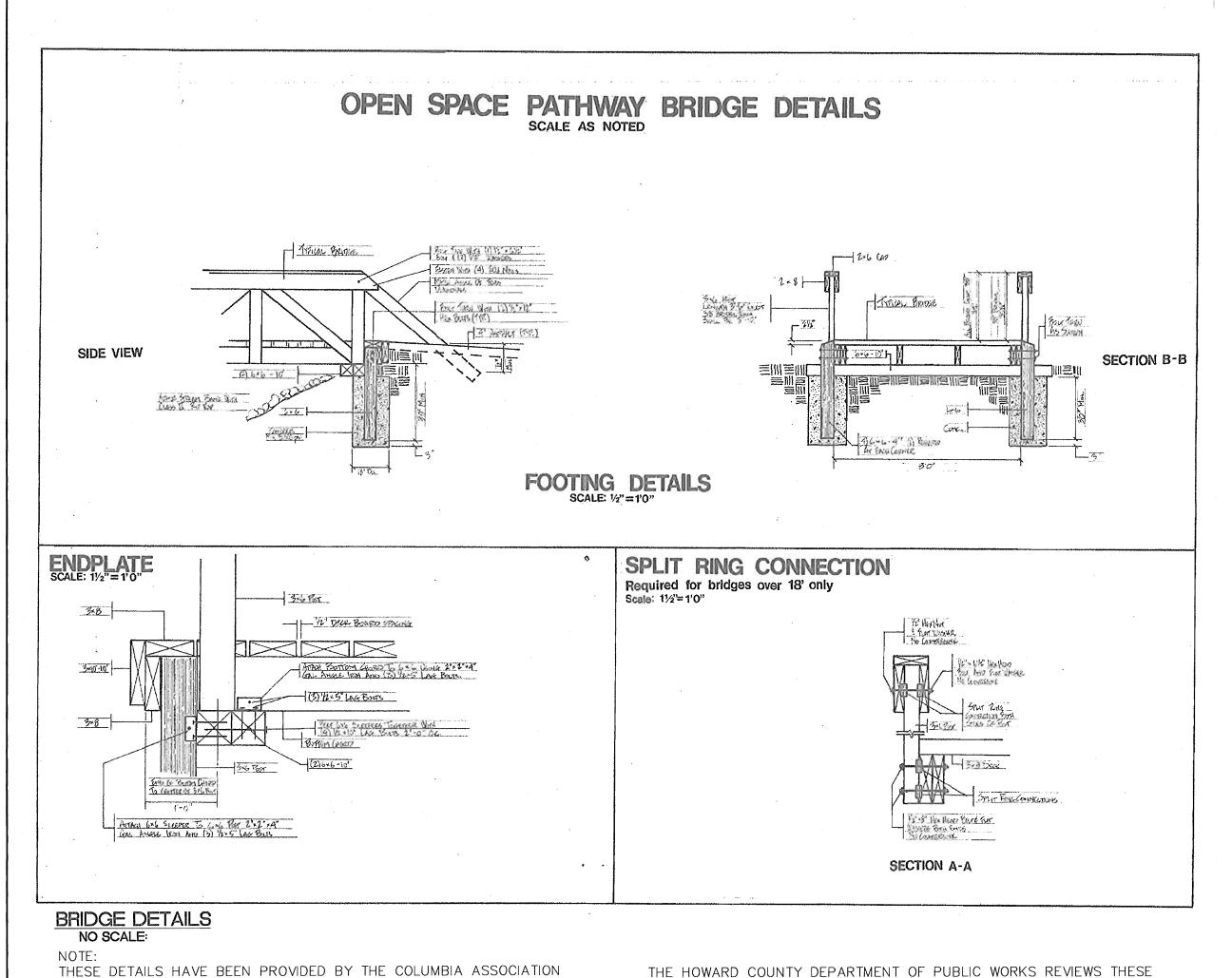
COLUMBIA - VILLAGE OF RIVER HILL SECTION 4 AREA 6 OPEN SPACE LOTS 56,58,59,60,69,&70 SECTION 4 AREA 4 OPEN SPACE LOTS 212,279,280,& 281 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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•	Des By	R.J.W.	Scale AS SHOWN	Proj No	00-006
	Drn By	R.H.D.	Date MAY 21, 2001	DRAWING NO	ti01PRPW.dwg
	Chk By	J.R.H.	SDP - 01-21	1	_OF_ 6 _

PARCEL: OS LOTS 56,58,5 60,69,70,212,279,280 & 28 TAX/ZONE ELEC. DIST. CENSUS T Professional Engr. No. 14920

SDP - 01-21

B=TOTAL BOARDWALK LENGTH



BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY.

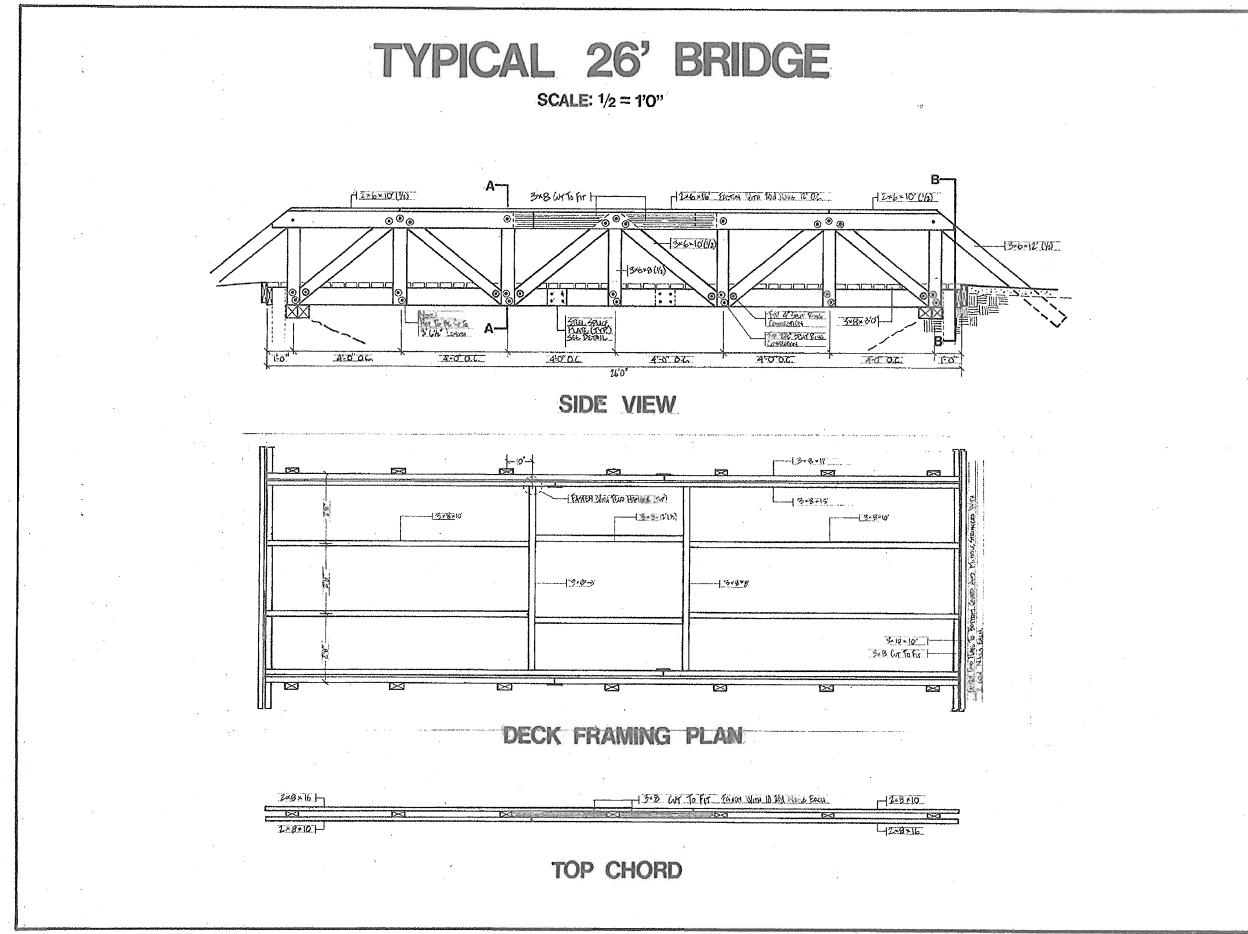
REVIEW IN THE BUILDING PERMIT PROCESS.

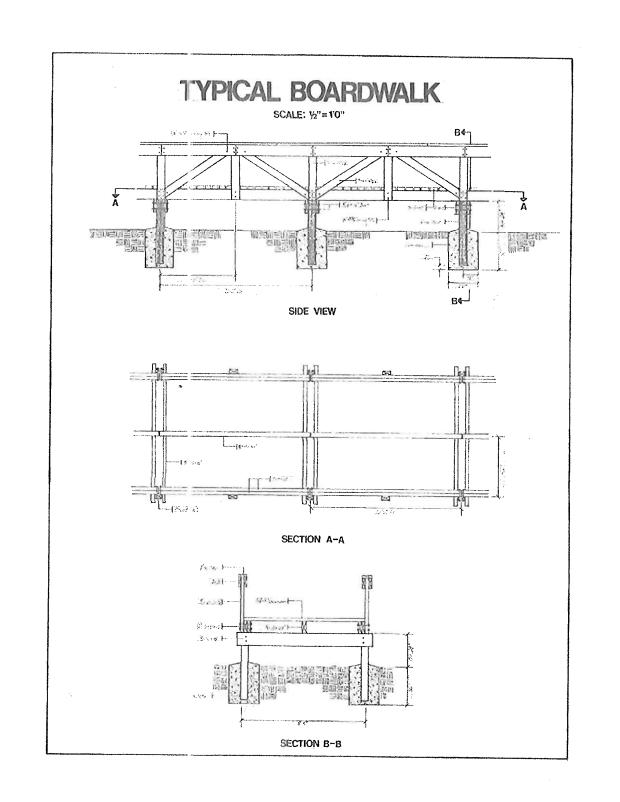
THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL

AND ARE GENERIC IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS

TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA

ASSOCIATION.



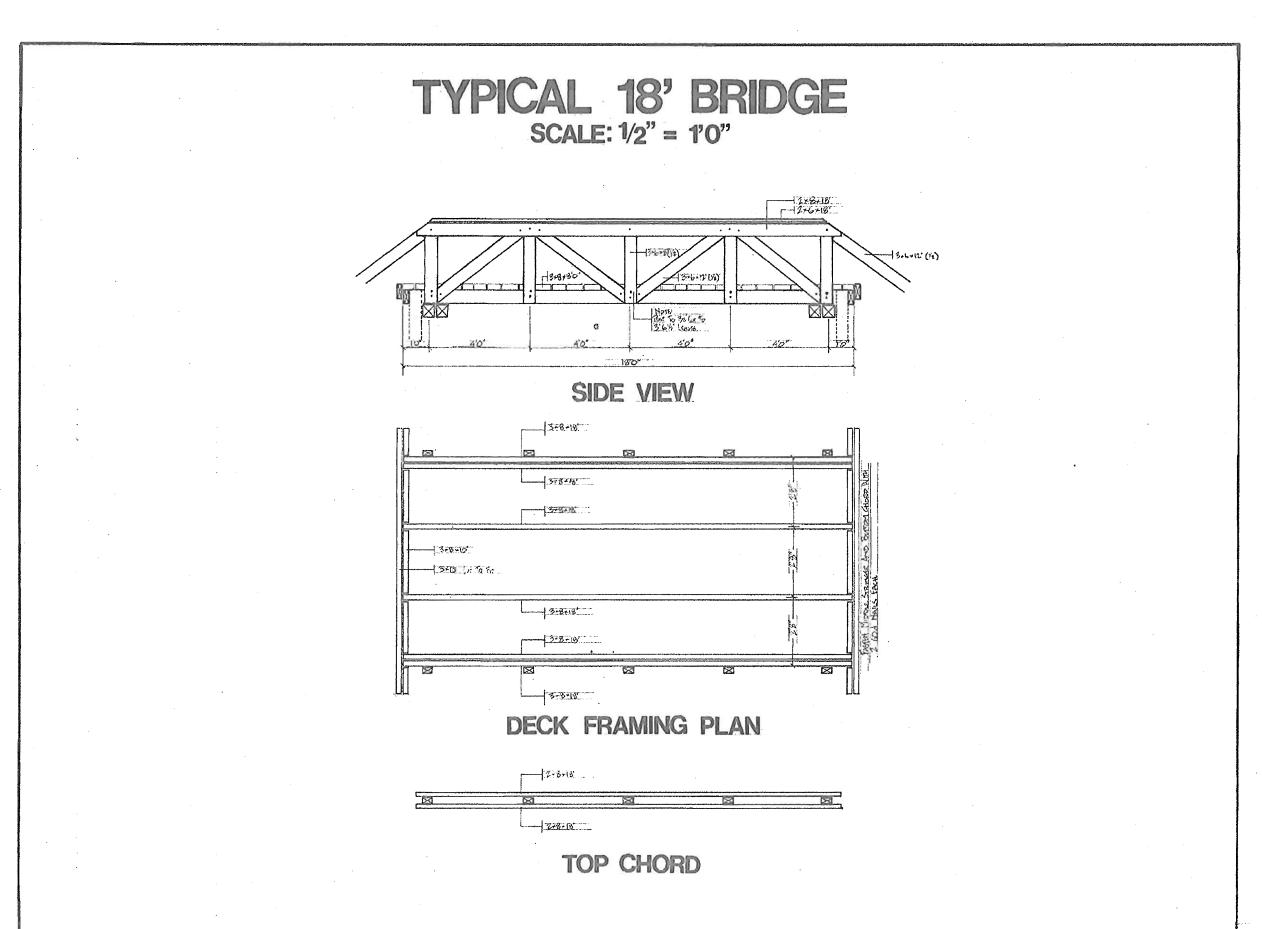


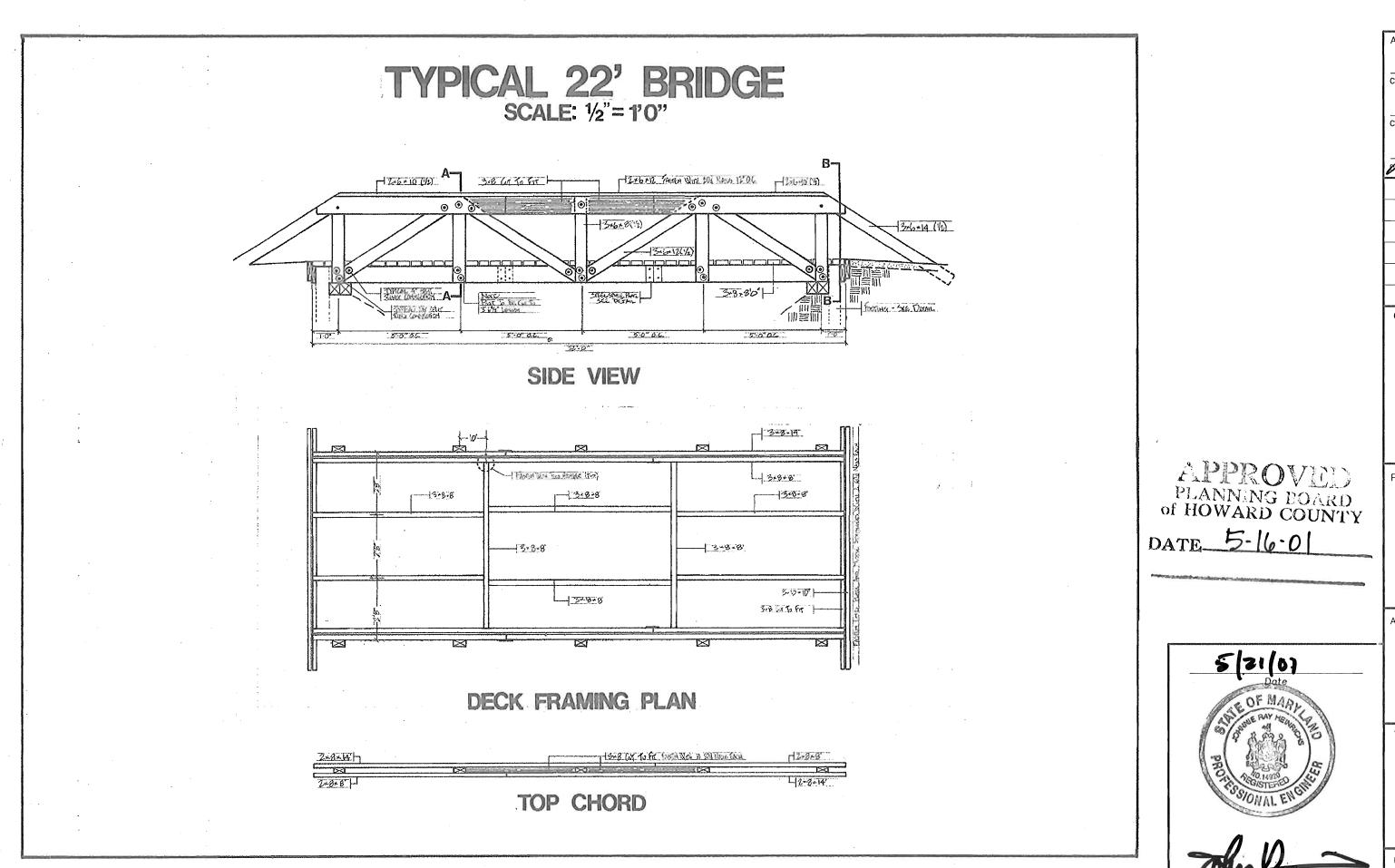
BOARDWALK DETAILS

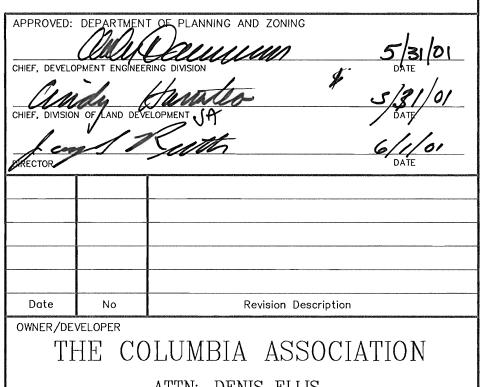
NO SCALE:

THESE DETAILS HAVE BEEN PROVIDED BY THE COLUMBIA ASSOCIATION AND ARE GENERI: IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA

THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS REVIEWS THESE BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY. THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL REVIEW IN THE BUILDING PERMIT PROCESS.







ATTN: DENIS ELLIS

10221 WINCOPIN CIRCLE SUITE 100 COLUMBIA MARYLAND 21044-3410 (410) 381-0383

PREPARED BY: PHOENIX ENGINEERING, INC.

CONSULTING ENGINEERS

813 MAIDEN CHOICE LANE, SUITE 300

PAITIMORE, MARYLAND 21228 (410) 247-8833 FAX 247-9397

2/31/01

JOHN R. HEINRICHS

COLUMBIA - VILLAGE OF RIVER HILL SECTION 4 AREA 6 OPEN SPACE LOTS 56,58,59,60,69,&70 SECTION 4 AREA 4 OPEN SPACE LOTS 212,279,280,& 281 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SITE DETAILS

Proj No 00-006 Scale AS SHOWN Drn By R.H.D. DRAWING NO de01PRPW.dwg Date MAY 21, 2001

F/ SUITABLE FOR SEEDING IN MID - SUMMER.

Table 25 Permanent Seeding For Low Maintenance Areas (Cont'd)

X

MIX	SEED MIX (USE CERTIFIED MATERIAL	PLANT RATE	ING	SITE CONDITIONS	USDA HARDI		RECO	MEND	ED PLA	ANTING	DATES		1	
	IF AVAILABLE)	LBS/AC	LBS/1000 SQ FT.		NESS ZONES	3/1- 5/15	3/15- 6/1	5/16- 8/14	6/2- 7/31	8/1- 10/1		8/15- 11/15	· [
7.	TALL FESCUE (83%)	110	2.5	DRY TO VERY	5b		X		X	X			(
, .	WEEPING LOVEGRASS (2%)	3	.07	DRY	6a		X		X	X				
	SERECIA LESPEDEZA (15%)	20	.46		6b	X		X			X			
					7a	X		X				X		
					7b	X		X				X		
8.	REED CANARYGRASS (75%)	40	.92	WET TO	5b		X			X				
	REDTOP (6%) PLUS BIRDSFOOT TREEFOIL (19%)	3 10	.07	MODERATELY DRY	6a		X			X				
	BIRDSFOOT TREEFOIL (19%)	10	10	.23		6b	X					X		_
					7a	X	sahihi da					X		
					7b	X						X		
9.	TALL FESCUE (86%)	125	2.9	WET TO	5b		X			X		-	_	
9.	POA TRIVIALIS (7%)	10	.23	MODERATELY	6a		X			X				
	BIRDSFOOT TREEFOIL (7%)	10	.23	DRY	6b	X					X			
10.	TALL FESCUE (80%)	120	3.4	WET TO DRY	5b		X			X				
	HARD FESCUE (20%)	30	.69		6a		X			X				
					6b	X					X			
					7a	X						X		
1					7b	X					,	X	-	
11.	114DD EECCHE (100%)	75	1.7	MOIST TO	5b		X			X	1		-	
, , ,	HARD FESCUE (100%)	/3	'./	DRY	6a		X			X			_	
					6b	X					X		_	
					7a	X						X	_	

G/ WEEPING LOVEGRASS MAY BE SEEDED WITH TALL FESCUE IN MID-SUMMER. SERECIA LESPEDEZA IS BEST SUITED FOR ZONES 7a AND 7b. 1/ USE ON POORLY DRAINED SOILS — DITCHES OR WATERWAYS. BIRDSFOOT TREEFOILIS BEST FOR ZONES 56, 6a, ABOVE 2000 FT. USE IN AREAS OF MOIST SHADE. POA TRIVIALIS THRIVES IN WET SHADY AREAS.

/ TALL FESCUE MAY BE SEEDED ALONE. THE HARD FESCUE PROVIDES BETTER SHADE TOLERANCE AND PRODUCES A BETTER STAND.

K/ LOW FERTILITY GRASS. REQUIRES INFREQUENT MOWING. GOOD COMPANION FOR WILDFLOWERS.

Permanent Seeding Summary

	Seed Mixt	ture (Hardiness From Table 25				rtilizer Ra 10-20-20		Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	Nate
	TALL FESCUE	126.32				475 11 /	475 11 /	0.1/
3.	PERENNIAL RYGRASS	14.81	3/1~5/15	1/4"	90 lb/ac (2.0 lb/	1/5 lb/ac (4.0 lb/ 1000 sf)	(4.0 lb/ac) (4.0 lb/ 1000 sf)	2 tons/ac (100 lb/ 1000 sf)
	KENTUCKY BLUEGRASS	10.02						

|Section | | | | | Permanent Seeding

Seeding grass an legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

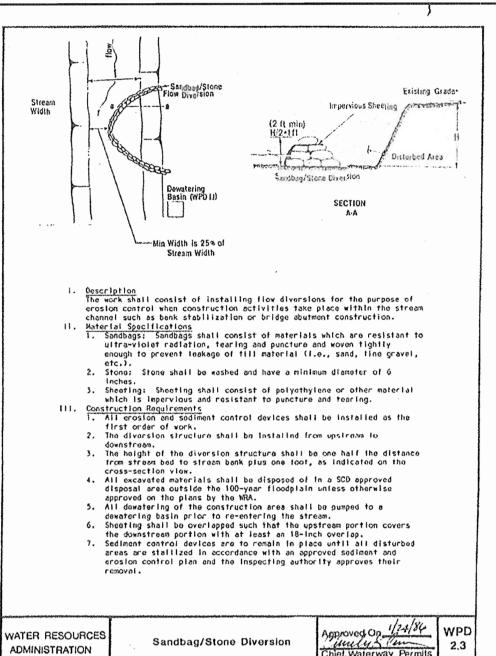
A. Seed Mixtures - Permanent Seeding

Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfarass.

ii. For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.

iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 ½ lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

G-20-9



DETAIL 22 - SILT FENCE 6' MINIMUM LENGTH FENCE POST DRIVEN A MINIMUM OF 16' INTO 16' MINIMUM HEIGHT DE GEDTEXTILE CLASS F - 8' MINIMUM DEPTH IN 36' MINIMUM FENCE PERSPECTIVE VIEW FENCE POST SECTION
MINIMUM 20' ABOVE
GROUND CLOTH ─► HATIATIATIATIATIATIA EMBED GENTEXTILE CLASS E -FENCE POST DRIVEN A A MINIMUM OF 8' VERTICALLY CROSS SECTION STANDARD SYMBOL SF -----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 11/2' x 11/2' square (minimum) cut, or 13/4' 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 Fi Test: MSMT 509 Tensile Strength 50 lbs/in (min.) 20 lbs/in (min.) Test: MSMT 509 Tensile Modulus 0.3 gal ft / minute (max.) Test: MSMT 322 Filtering Efficiency 75% (min.) Test: MSMT 322 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. MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE

WATER MANAGEMENT ADMINISTRATION

MARYLAND DEPARTMENT OF ENVIRONMENT

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

SILT FENCE CONTRACTOR SHALL PROVIDE CURLEX SLOPE STABILIZATION AT ALL SLOPED AREAS ADJACENT TO CONSTRUCTION Silt Fence Design Criteria (MaxImum) Silt Fence Length Slope Steepnes: Slope Length TYPICAL SILT FENCE PLACEMENT Flatter than 50: unlimited unlimited (CURL 2' UPSLOPE AT ENDS) 125 feet 1,000 feet 50:1 to 10:1 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 20 feet 2:1 and steeper SLOPE 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 PROPOSED BOARDWALK 2' VARIES 12' VARIES BOARDWALK AND BRIDGE INSTALLATION PLAN

> WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE Table 26 Temporary Seeding Rates, Depths, and Dates

ILS DEPARTMENT OF AGRICULTURE

	T		T	T			·		···			
SPECIES	MINIMUM SEEDII	NC PATES	PLANTING									
SPECIES	WIINIWOW SEEDII	NG RAILS	DEPTH ³⁶	DEPTH ³⁶ 7a and 7b		6b			6a and 5b			
	PER ACRE	LBS/1000 SQ. FT.	INCHES	2/1- 4/30	5/1- 8/14	8/15- 11/30	3/1- 4/30	5/1- 8/14	8/15- 11/15	3/15- 5/31	6/1- 7/31	8/1- 10/31
CHOOSE ONE: BARLEY OATS RYE 39	2.5 BU. (122 lbs) 3 BU. (96 lbs) 2.5 BU. (140 lbs)	2.21	1-2 1-2 1-2	X X X	_ _ _	BY 10/15 - X	× × ×	- - -	BY 10/15 - X	X X X	_ _ _	BY 10/1 - X
BARLEY OR RYE PLUS FOXTAIL MILLET*	150 lbs.	3.45	1	X	×	10/15 X	×	××	10/15 X	×	X	10/1 X
WEEPING LOVEGRASS ⁴¹	4 lbs.	.09	1/4-1/2	_	X		_	X	-	_	X	_
ANNUAL RYEGRASS	50 lbs.	1.15	1/4-1/2	X		11/1	X		11/1	X		8/15
MILLET ¹²	50 lbs.	1.15	1/2		X	-	_	X	_	_	X	

36. Applicable on slopes of 3:1 or flatter

SCALE: NTS

37. Refer to figure A -- Adopted from USDA, ARS Miscellaneous Publication #1475, January 1990 38. Between fall and spring seeding dates, use mulch only if ground is frozen and reseed when thawed.

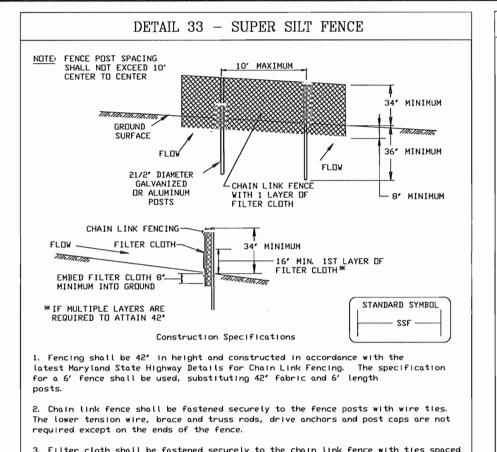
39. May be used as a nurse crop for late fall/early winter permanent seedings, add 56 lbs./ac to the permanent seeding mixture.

40. Maryland State Highway Administration Temporary Seed Mix.

41. May be used as a nurse crop for mid-summer permanent seedings. Add 2 lbs/ac to permanent seed mix. 42. May be used as a nurse crop for mid-summer permanent seedings. Add 10 lbs/ac to the permanent seed mix.

Table 24 Maintenance Fertilization for Permanent Seedings Use Soil Test Results or Rates Shown Below

Seeding Mixture	Туре	lb/ac	lb/1000 sf	Time	Mowing
Tall fescue makes up 70% or more of cover	10-10-10 or 30-10-10	500 400	11.5 9.2	Yearly as needed. Fall	Not closer than 3" if occasional mowing is desired
Crownvetch Sericea Lespedeza Birdsfoot Trefoil	0-20-0	400	9.2	Spring, the year following establishment and every 4—5 years thereafter	Do not mow crownvetch
Fairly uniform stand of tall fescue and sericea lespedeza, or birdsfoot trefoil	5-10-10	500	11.5	Fall, the year following establishment and every 4—5 years thereafter	Not required, no clos &1.5 han 4" in the fall after seed has matured.
Weeping lovegrass & sericea lespedeza fairly uniform plant distribution.	5-10-10	500	11.5	Spring, the year following establishment and every 3—4 years thereafter.	Not required, no closer than 4" in the fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures	20-10-10	250 100	5.8 2.3	September, 30 days later. December, May20, June 30, if needed.	Mow no closer than 2" for red fescue and K. bluegrass, 3" for fescue.



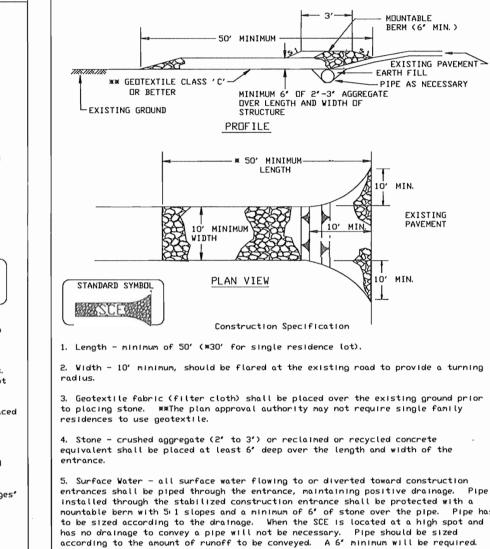
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced 4. Filter cloth shall be embedded a minimum of 8' into the ground. 5. When two sections of filter cloth adjoin each other, they shall be overlapped

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

Tensile Strength 50 lbs/in (min.) Tensile Modulus 20 lbs/in (min.) Testi MSMT 509 0.3 gal/ft²/minute (max.) Testi MSMT 322 Flow Rate

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving Filtering Efficiency Test: MSMT 322 the site must travel over the entire length of the stabilized construction entrance U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE

	SUPE	R SHT FENCE	
	<u>Design</u>	i Criteria	
Slope	Stope Steepness	Slope Length (max1mum)	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
	2:1 +	50 feet	250 feet



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

SOIL CONSERVATION SERVICE SEDIMENT CONTROL NOTES

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS

PRIOR TO THE START OF ANY CONSTRUCTION. (410-313-2455)

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND

3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL.1, 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 FROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52.) TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTAB-LISHMENT OF GRASSES.

6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM

TOTAL AREA OF SITE 58.97 AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED 2.22 ACRES TOTAL CUT TOTAL FILL OFFSITE WASTE/BORROW AREA LOCATION TO BE DETERMINED

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 DPW SEDIMENT CONTROL INSPECTOR.

10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES. APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

PERMANENT SEEDING NOTES

MARYLAND DEPARTMENT OF ENVIRONMEN

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, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES: 1) PREFERRED -- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQUARE FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT.)

2) ACCEPTABLE -- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW

OR DISC INTO UPPER THREE INCHES OF SOIL. SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH O LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTÜCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28. PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

 $\underline{\text{MULCHING}}$ -- APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ACHORING. MAINTENANCE -- INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEP-TABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.). SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL

ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

FOR RATE AND METHODS NOT COVERED.

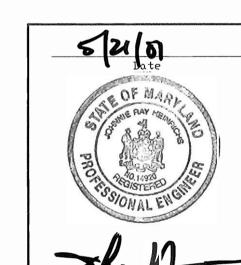
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

5-16-0

APPROVED
PLANNING BOARD

of HOWARD COUNTY



SEQUENCE OF CONSTRUCTION

Obtain a grading permit and all other necessary permits $-\ 1$ Day. Notify the Howard County Bureau of Licenses, Inspections and Permits at least 48 hours before beginning any work. Determine stabilized construction entrances and project phasing — 2 Days. All work in nontidal wetlands, wetland buffers, waterways and 100 year floodplain shall be in conformance with the Best

Management Practices given on this sheet and with the Letter of Authorization for this project issued by the Maryland Department of the Environment. After the completion of steps 1 & 2 comply with the following steps for each phase of construction:

Install stabilized construction entrances — 1 Day. Stake out pathway - 2-3 Days. Install silt fence, tree protection fence and other perimeter controls. Pathway disturbance/construction and restabilization is to occur in 200 LF segments maximum. -3-4 Days.

Obtain approval from inspector prior to proceeding — 1 Day. Begin clearing and grubbing for construction — 1 Week. Grade pathway maintaining positive drainage at all times -1-2

10. Compact subgrade and install aggregate base for pathway — 1

Install perimeter controls for bridges and boardwalks. In-stream work for the installation of riprap shall be in accordance with the detail for Sandbag / Stone diversion on this sheet — 1 Week. Install bridges and boardwalks -1-2 Weeks.

Install pathway pavement — 1—2 Weeks. Stabilize all disturbed areas with seed and mulch within 14 days of disturbance. Note see restrictions in the Best Management Practices - 1-2 Weeks.

Upon stabilization of the site and approval of the Howard County Sediment Control Inspector, remove sediment and erosion

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. in / hypo / 65. USDA ATURAL RESOURCES CONSERVATION SERVICES RY THE ENGINEER: "I/WE 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 COUNTY SOIL CONSERVATION DISTRICT "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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT I ALSO AUTHORIZE PERIODIC CN-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT." 5.21.01 Xey Com COLUMBIA ASSOCIATION THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT APPROVED Date Revision Description OWNER/DEVELOPER THE COLUMBIA ASSOCIATION

ATTN: DENIS ELLIS

10221 WINCOPIN CIRCLE SUITE 100 COLUMBIA MARYLAND 21044-3410

(410) 381-0383

PREPARED BY: PHOENIX ENGINEERING, INC. CONSULTING ENGINEERS 813 MAIDEN CHOICE LANE, SUITE 300

BALTIMORE, MARYLAND 21228 (410) 247-8833 FAX 247-9397

COLUMBIA - VILLAGE OF RIVER HILL SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70 SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280,& 281 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SEDIMENT AND EROSION CONTROL NOTES AND **DETAILS**

Des By R.J.W. Proj No 00-006 Orn By R.H.D. RAWNG NO De03prpw Date MAY 21, 2001 Chk By J.R.H. SDP-01-21