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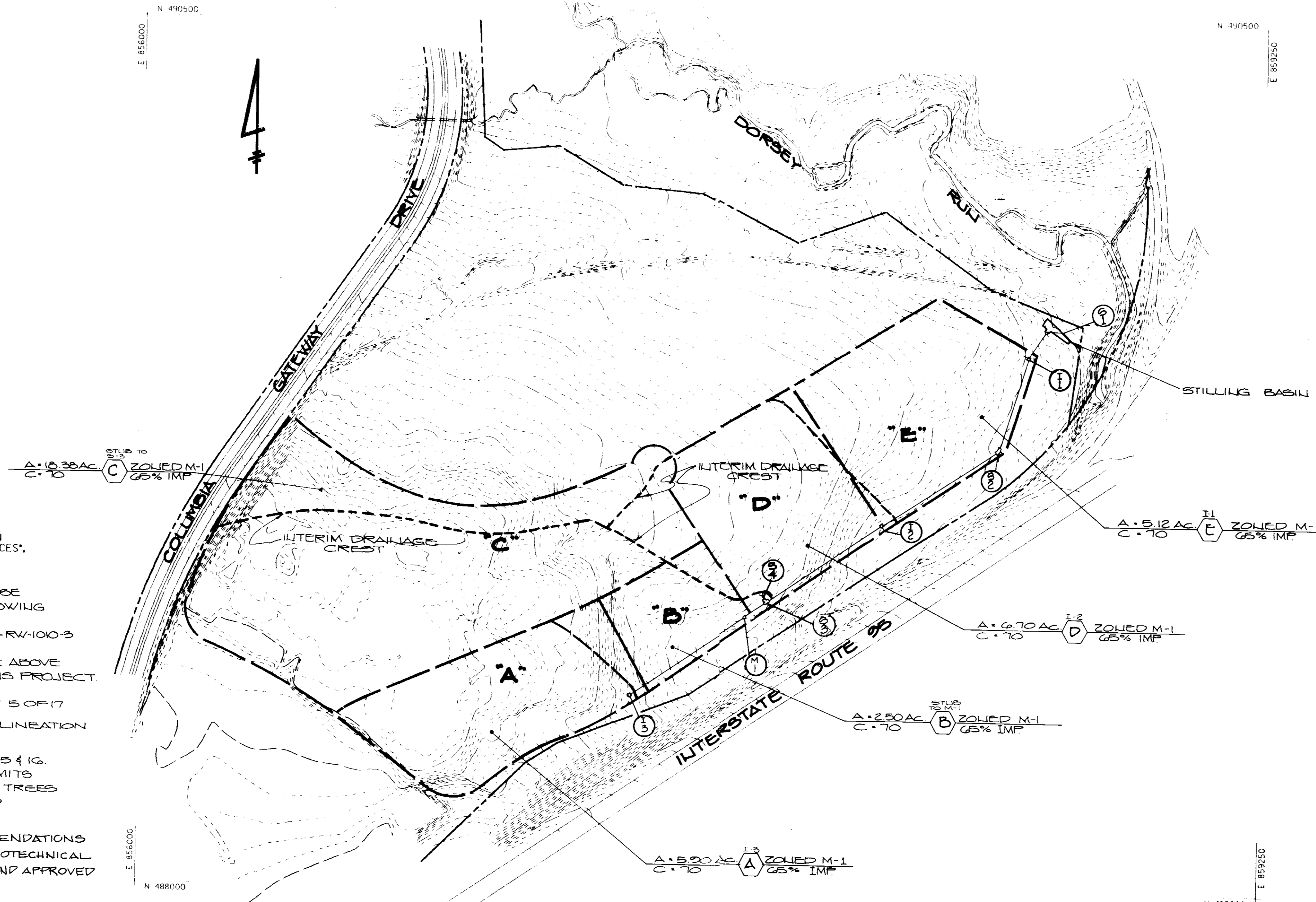
COLUMBIA GATEWAY

6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

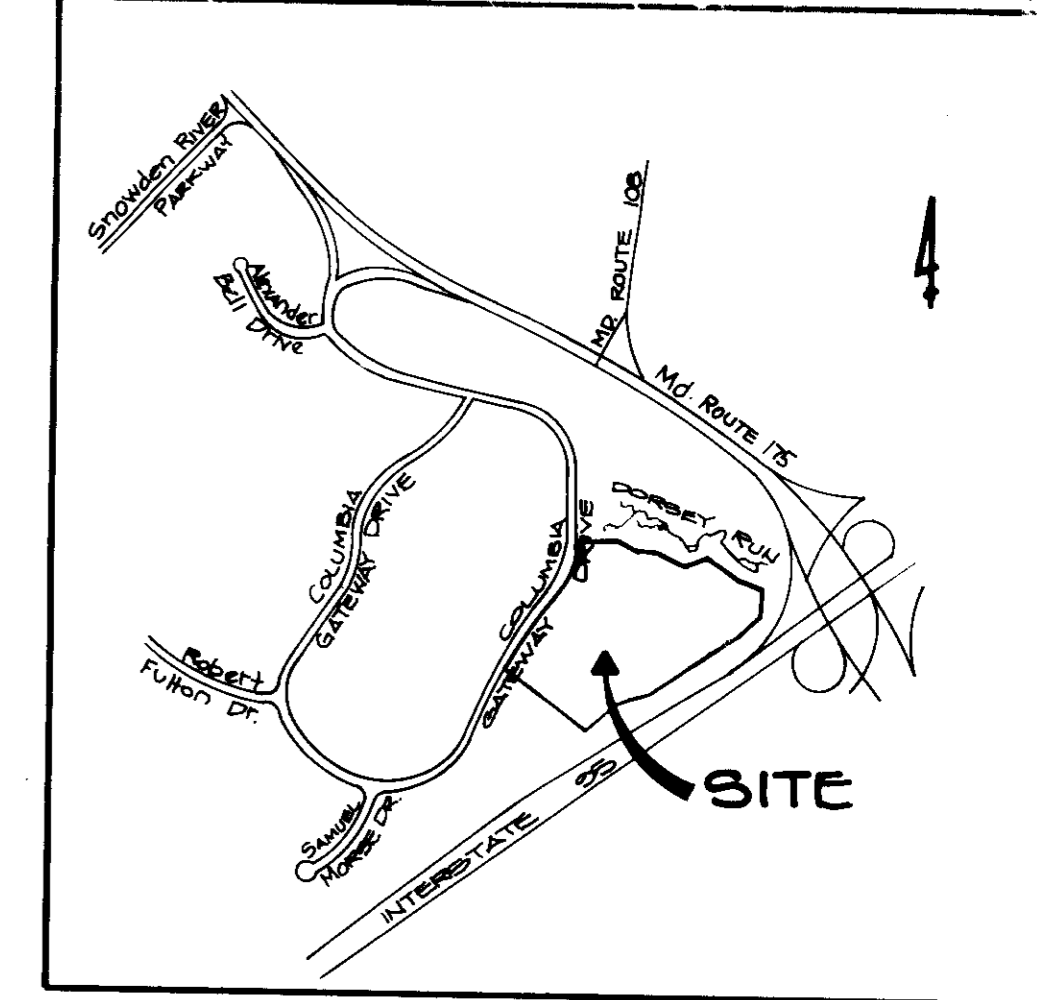
GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. FROM BEST AVAILABLE INFORMATION THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
4. CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	752-9976
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS AND ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION/SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-1272
5. TOPOGRAPHY TAKEN FROM AERIAL SURVEY COMPILED BY "MAPS, INC." WITH SUBSEQUENT REVISIONS ACCORDING TO FIELD RUN TOPO & AS-BUILT DRAWINGS.
6. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
7. THIS PLAN AND THE COORDINATES SHOWN HEREON ARE BASED ON THE MARYLAND STATE PLAN COORDINATE SYSTEM, REFERENCE HOWARD COUNTY CONTROL POINTS 2243002, 2243003, 2344002.
8. STORM DRAIN STRUCTURES TO BE IN ACCORDANCE WITH HOWARD COUNTY STD. SPEC. & DETAILS, AND MD. S.H.A., ALL STORM DRAIN PIPE TO BE RCCP OR C.M.P.
9. TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT OF WAY LIMITS SHALL BE IN ACCORDANCE WITH THE 1982 HOWARD COUNTY ROAD CODE.
10. MINIMUM COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES IN ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
11. ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", 1978 REVISED EDITION.
12. NON-TIDAL WETLANDS EXIST ON THIS SITE. FILLING OF THE WETLANDS ON THIS LOT WITH THIS EXCEPTION OF THOSE SHOWN ON THIS PLAN WAS AUTHORIZED BY THE FOLLOWING PERMITS:
 - U.S. ARMY CORPS OF ENGINEERS - CEJLAB-OP-RW-100-3
 - MD DEPT. OF ENVIRONMENT - 88WQ-0481
 WETLAND FILL OPERATIONS AUTHORIZED BY THE ABOVE PERMITS WILL BE UNDERTAKEN AS PART OF THIS PROJECT.
13. FOR PIPE SLOPE DRAINS SEE DETAIL SHEET 5 OF 17
14. SEE EXIST. D.A. MAP FOR STEEP SLOPE DELINEATION (SHT. 6 OF 17).
15. FOR FINAL TREE LOCATION SEE SHT'S 14, 15 & 16. THE SITE WILL BE CLEARED TO THE LIMITS SHOWN ON THE PLANS THE REMAINING TREES ARE A MIX OF MATURE DECIDUOUS AND EVERGREEN TREES.
16. THE CONTRACTOR SHALL ADHERE TO THE RECOMMENDATIONS OF THE BALTER COMPANY CONTAINED IN THE GEOTECHNICAL REPORT DATED JANUARY 14, 1991 AND REVIEWED AND APPROVED BY HOWARD SOIL CONSERVATION DISTRICT.



DRAINAGE AREA MAP
SCALE 1"=200'



VICINITY MAP
SCALE 1"=2000'

SITE ANALYSIS

AREA OF PARCEL 172,916 AC.
 AREA OF LIMIT OF SUBMERSION 66,450 AC.
 PRESENT ZONING M-1
 PROPOSED USE MASS GRADING

LEGEND

- EXISTING CONTOUR
- - - - - PROPOSED CONTOUR
- WETLANDS
- WETLANDS BUFFER
- EARTH DIKE
- SILT FENCE
- DOUBLE ROW SILT FENCE
- PERIMETER DIKE SWALE
- STABILIZED CONST. ENTRANCE W/ MOUNTABLE BERM
- SLOPE PROTECTION
- LIMIT OF DISTURBANCE
- 25% SLOPES

APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEM
 HOWARD CO. HEALTH DEPT.
 COUNTY HEALTH DEPT. 11-6-92
 APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE
 STORM DRAINAGE SYSTEM & PUBLIC ROADS
 HOWARD CO. DEPT. OF PUBLIC WORKS
 DIRECTOR 12-23-92
 CHIEF, BUREAU OF ENGINEERING MK DATE 12-23-92
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 DIRECTOR 1/23/92
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE 1/23/92

KIDDE CONSULTANTS, INC.

ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

DESIGNED J.J.D.
 DRAWN M.D.D.
 CHECKED D.L.M.
COLUMBIA GATEWAY
 A PORTION OF PARCEL "T"
 COVER SHEET, VICINITY MAP
 DRAINAGE AREA MAP, GENERAL NOTES
 DATE 4/25/90
 SCALE AS SHOWN
 DRAWING 1 of 17
 JOB NO. 90-0004
 SHEET NO.

SUBDIVISION NAME				ADDRESS CHART	
COLUMBIA GATEWAY				LOT NUMBER	STREET ADDRESS
FLAT # OF LOT	BLOCK	ZONE	TAX/ESCH MAP	ELSE. CRT.	CELEBRITY
FLAT # 7542	1, 2, 7, 8	M-1	43	GTH	G065.02
WATER CODE			SEWER CODE		
				DATE	
				OWNER DEVELOPER	
				THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY	
				10275 LITTLE PATUXENT PARKWAY	
				COLUMBIA, MARYLAND 21044	

SDP 90205

APPROVED: *[Signature]* 1-6-92
 COUNTY HEALTH OFFICER DATE

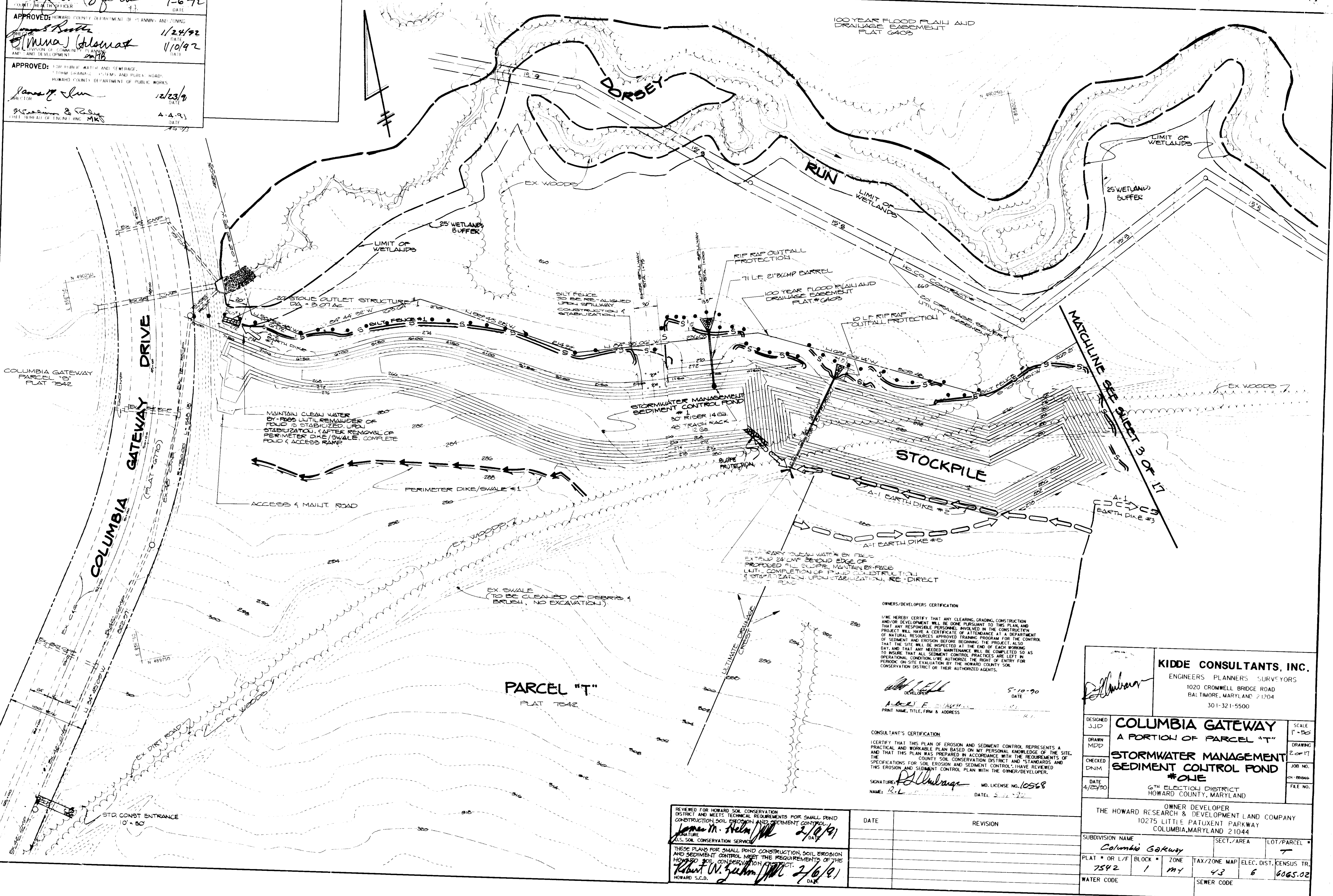
APPROVED: *[Signature]* 1/24/92
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE

APPROVED: *[Signature]* 1/10/92
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE

APPROVED: *[Signature]* 12/23/90
 FOR PUBLIC WATER AND SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE

[Signature] 4-4-91
 PROJECTOR DATE

[Signature] 4-4-91
 DATE



OWNERS/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND 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, ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

[Signature] DEVELOPER 5-10-90 DATE
 A. B. L. F. PRINT NAME, TITLE, FIRM & ADDRESS

CONSULTANT'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

[Signature] MO. LICENSE NO. 10568
 NAME: R. L. DATE: 5-10-90

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 2/10/91
 JAMES M. HELM
 HOWARD COUNTY SOIL CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

[Signature] 2/10/91
 ROBERT W. JACOBSON
 HOWARD S.C.D.

DATE	REVISION

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

[Signature]

DESIGNED JJD	COLUMBIA GATEWAY A PORTION OF PARCEL "T" STORMWATER MANAGEMENT SEDIMENT CONTROL POND #ONE 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1"=50'
DRAWN MDD		DRAWING 20-17
CHECKED DNM		JOB NO.
DATE 4/25/90		FILE NO.

OWNER/DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

SUBDIVISION NAME Columbia Gateway	SECT./AREA	LOT/PARCEL #
PLAT # OR L/F 7542	BLOCK # 1	ZONE M7
TAX/ZONE MAP 43	ELEC. DIST. 6	CENSUS TR. 606S.02
WATER CODE	SEWER CODE	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DATE: 1-6-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DATE: 1/24/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DATE: 1/10/92

APPROVED: PUBLIC WORKS AND SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DATE: 12/23/91

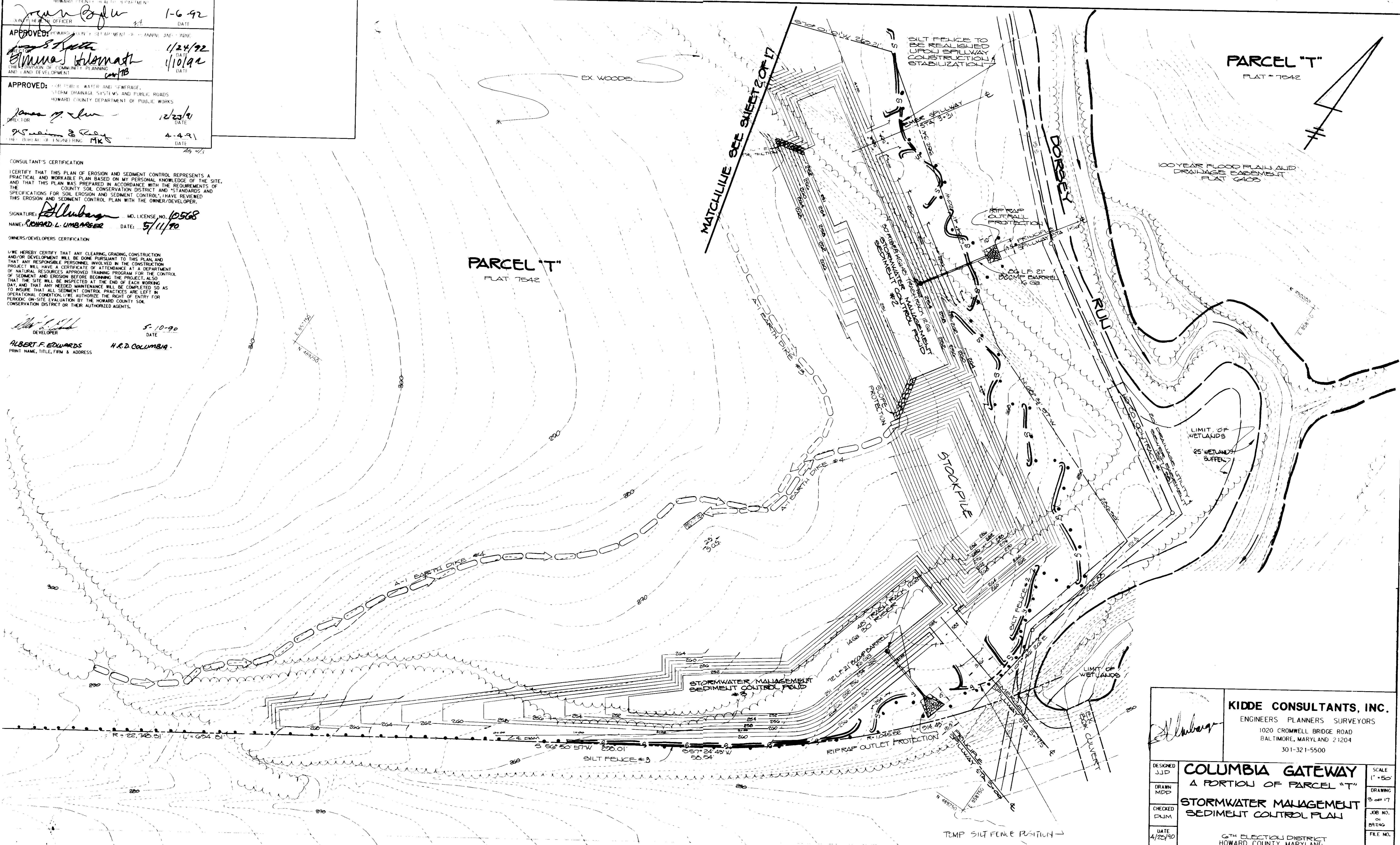
APPROVED: ENGINEERING
 DATE: 4-4-91

CONSULTANT'S CERTIFICATION
 I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: *[Signature]* MD. LICENSE NO. 10568
 NAME: ROYAL L. UMBARGER DATE: 5/11/90

OWNER'S/DEVELOPER'S CERTIFICATION
 I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT 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, ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

SIGNATURE: *[Signature]* DATE: 5-10-90
 DEVELOPER
 ALBERT F. EDWARDS H.R.D. COLUMBIA
 PRINT NAME, TITLE, FIRM & ADDRESS



INTERSTATE ROUTE 95
 M.S.R.C. RW PLATS # 24,755, 24,760

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 SIGNATURE: *[Signature]* DATE: 2/6/91
 U.S. SOIL CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 SIGNATURE: *[Signature]* DATE: 2/6/91
 HOWARD S.C.D.

DATE	REVISION

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

DESIGNED: JJD
 DRAWN: MDD
 CHECKED: DJM
 DATE: 4/25/90

COLUMBIA GATEWAY
 A PORTION OF PARCEL "T"
STORMWATER MANAGEMENT SEDIMENT CONTROL PLAN

SCALE: 1" = 50'
 DRAWING: 3 OF 17
 JOB NO.: BR246
 FILE NO.:

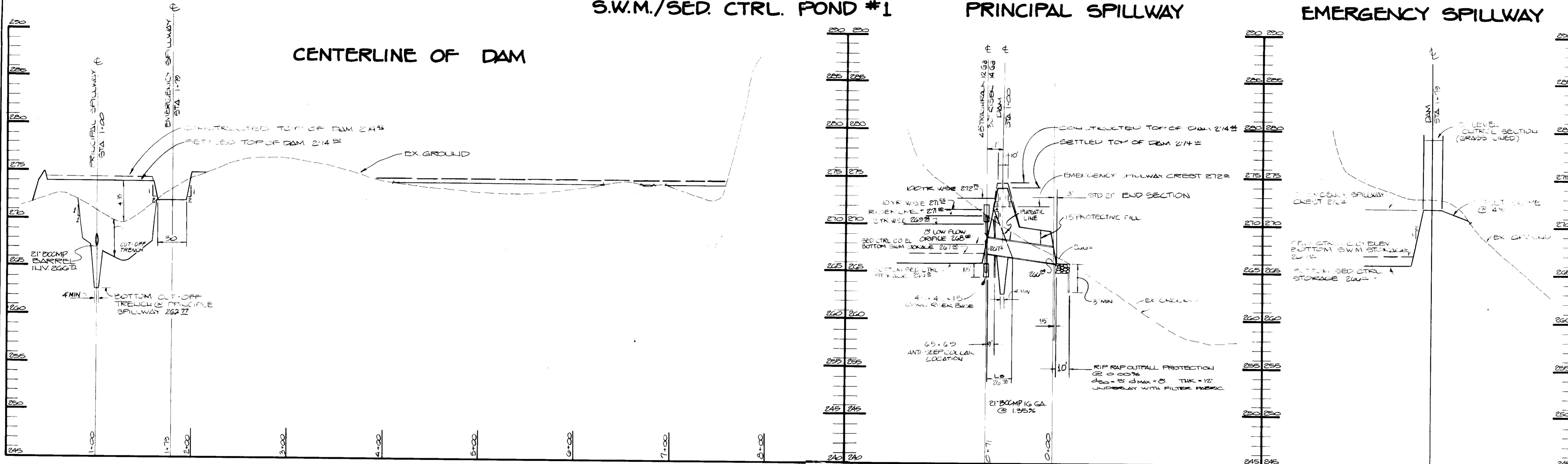
OWNER DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

SUBDIVISION NAME: Columbia Gateway
 PLAT: 7542 BLOCK: 1 ZONE: M-1 TAX/ZONE MAP: 43 ELEC. DIST.: 6 CENSUS TR.: 0065.02
 WATER CODE: SEWER CODE:

S.W.M./SED. CTRL. POND #1

PRINCIPAL SPILLWAY

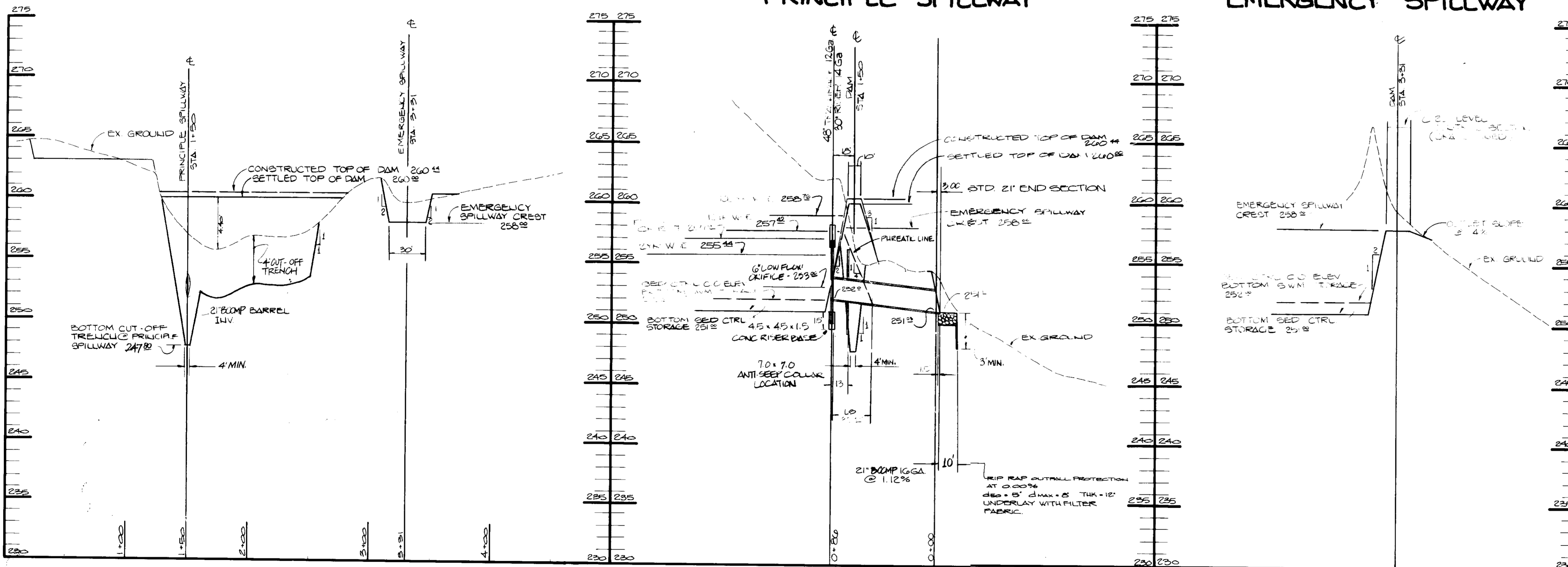
EMERGENCY SPILLWAY



CENTERLINE OF DAM

PRINCIPLE SPILLWAY

EMERGENCY SPILLWAY



S.W.M./SED. CTRL. POND #2

PROFILES

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

"I, WE CERTIFY THAT DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mark Fells
SIGNATURE OF DEVELOPER 11-9-90
DATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Robert A. Helms
SIGNATURE OF ENGINEER 11-9-90
DATE

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEM
HOWARD CO. HEALTH DEPT.

John Jones 1-6-92
CO. HEALTH OFFICER DATE

APPROVED: FOR PUBLIC WATER & SEWERAGE STORM DRAINAGE SYSTEM & ROADS
HOWARD CO. DEPT. OF PUBLIC WORKS

James J. ... 2/23/92
DIRECTOR DATE

William S. ... 4-14-92
CHIEF BUREAU OF ENGINEERING MK DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

James ... 11-24-92
DIRECTOR DATE

William Helms 1/22/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

KIDDE CONSULTANTS, INC.

ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED J.J.D.	COLUMBIA GATEWAY A PORTION OF PARCEL 'T'	SCALE AS SHOWN
DRAWN M.D.D.		DRAWING A-0017
CHECKED D.N.M.	STORMWATER MANAGEMENT PROFILES	JOB NO. 0189295
DATE 4/25/90		SHEET NO.
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		

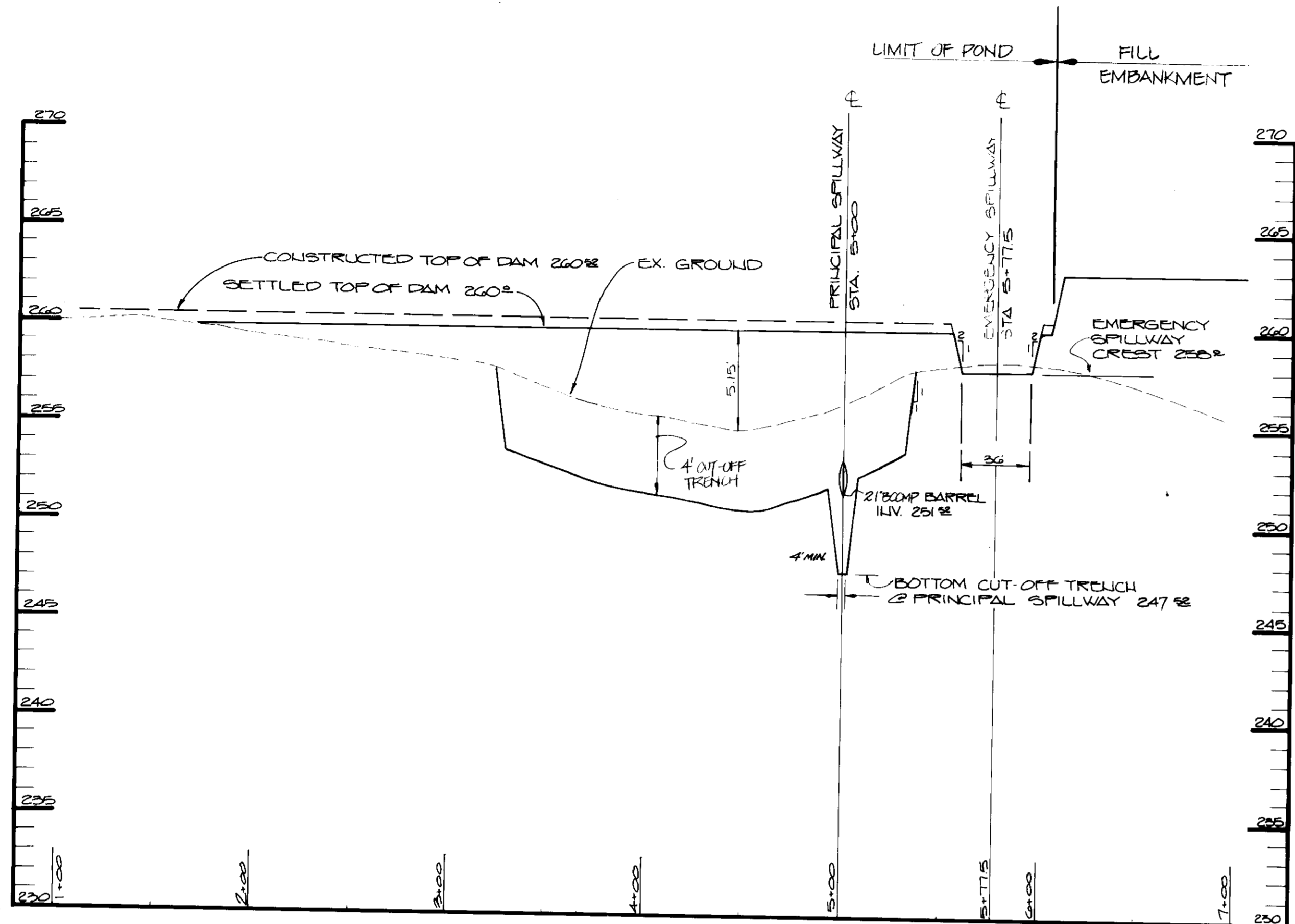
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
James M. ... 2/16/91
SIGNATURE U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Robert A. Helms 2/16/91
SIGNATURE HOWARD S.C.D. DATE

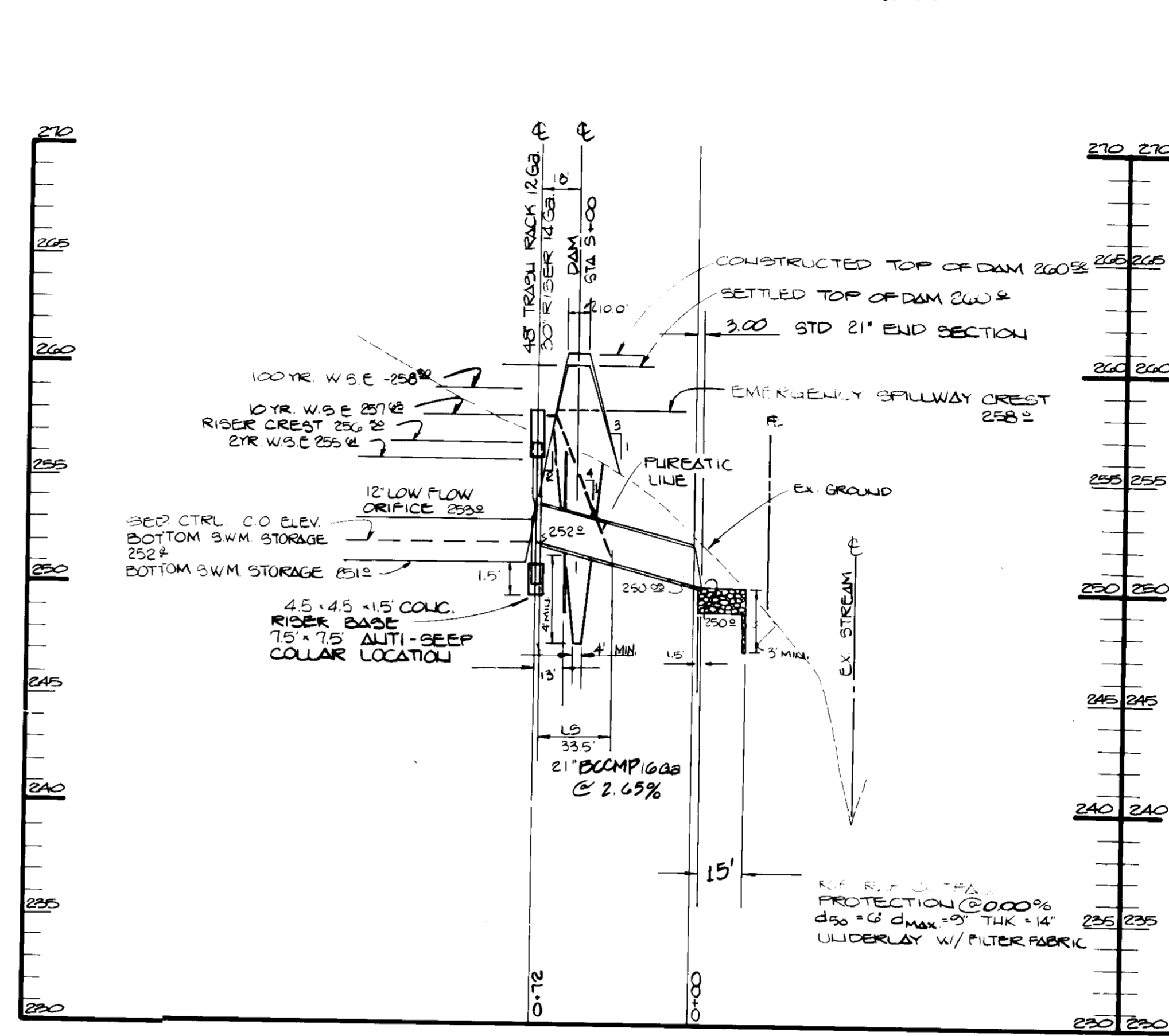
OWNER DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

S.W.M./SED. CTRL. POND #3

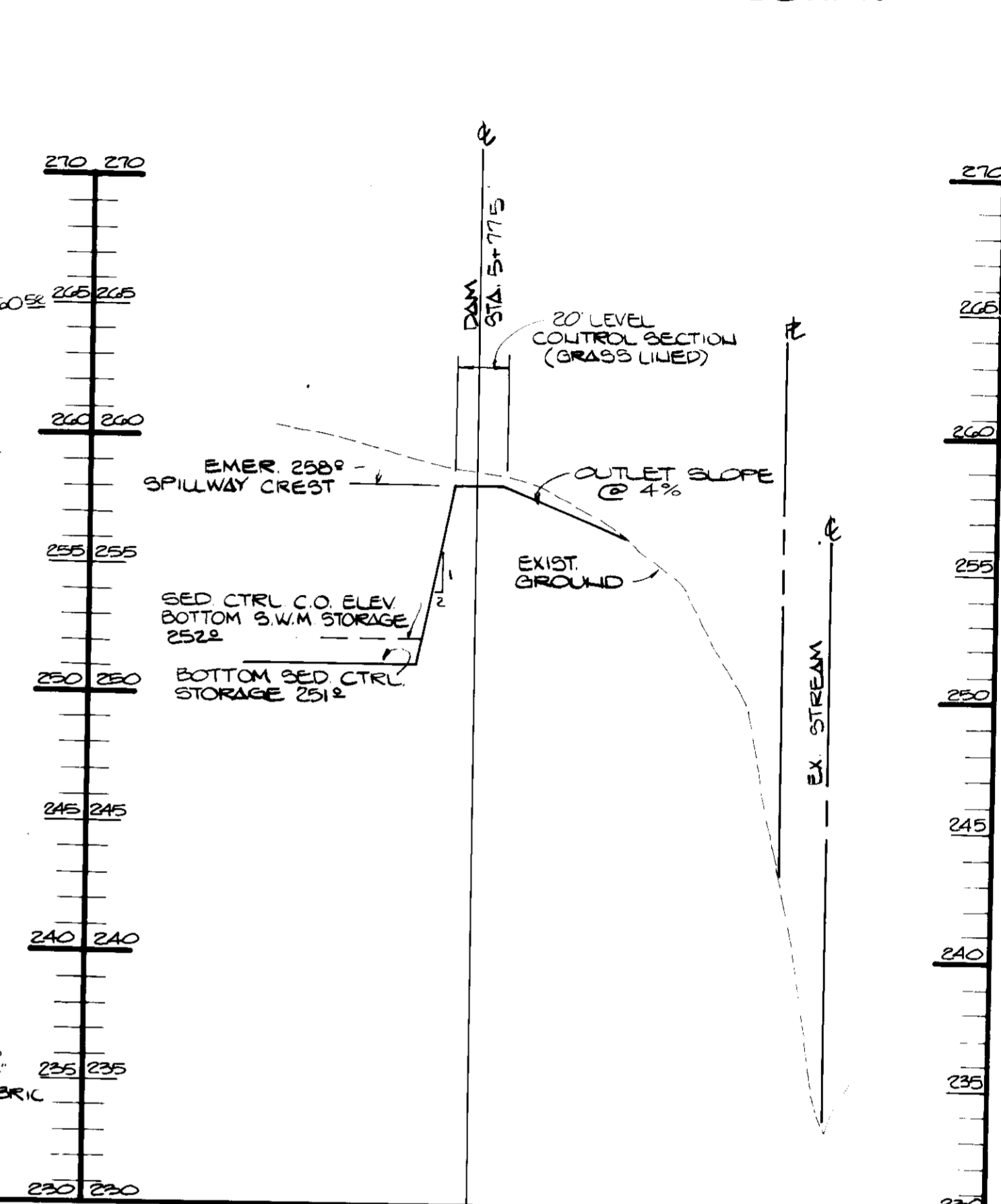
CENTERLINE OF DAM



PRINCIPAL SPILLWAY

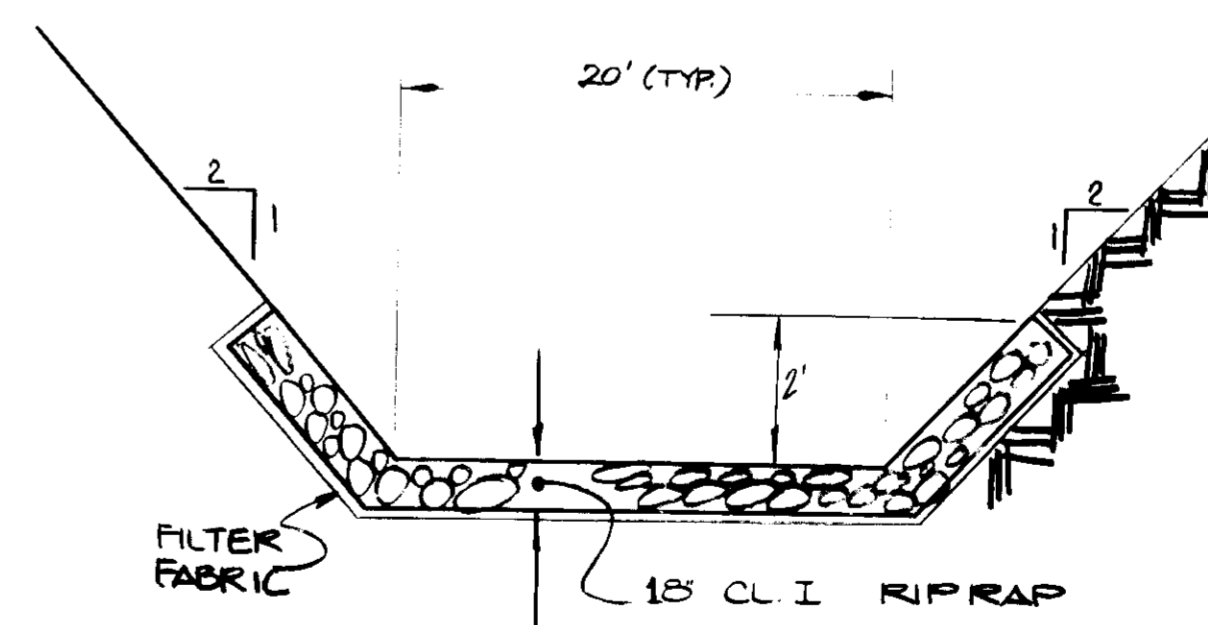
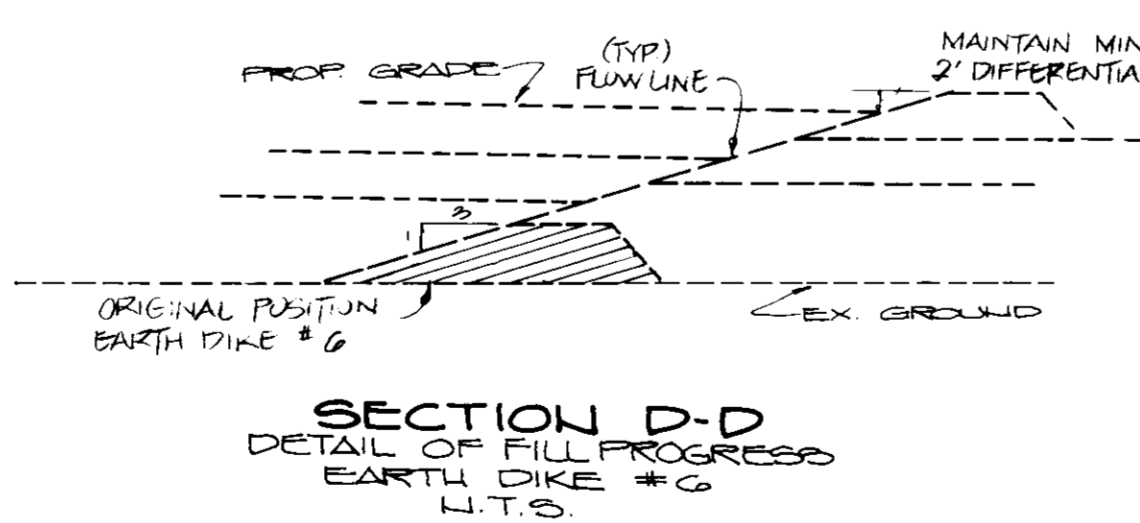
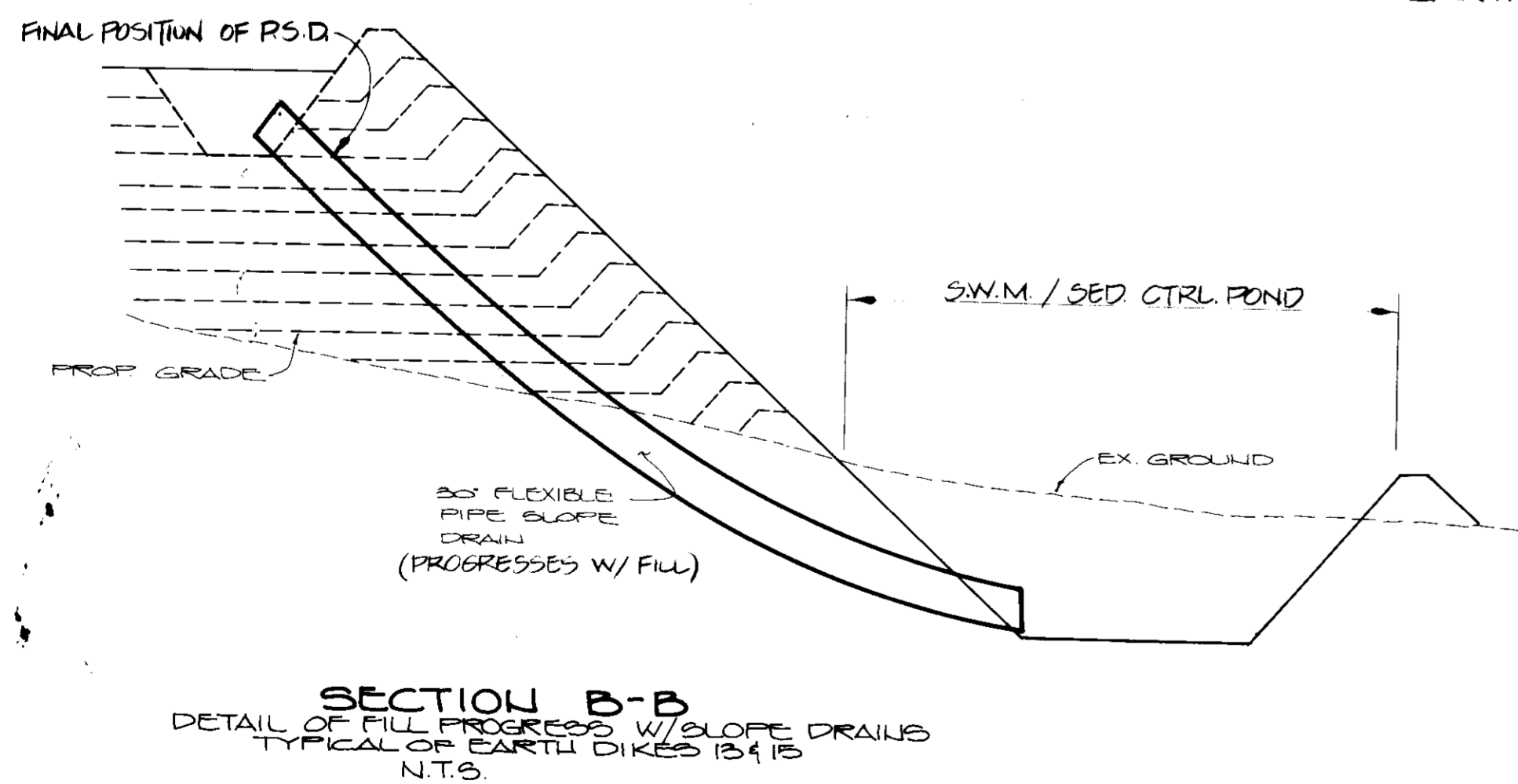
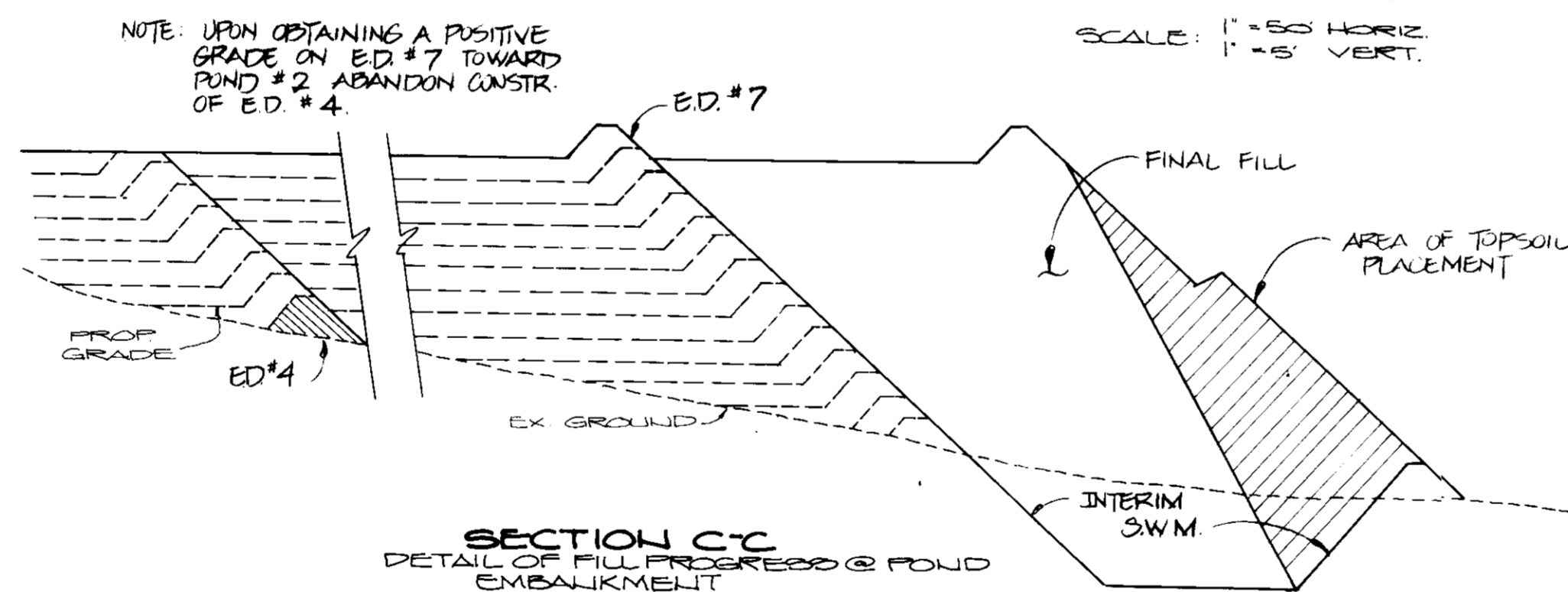
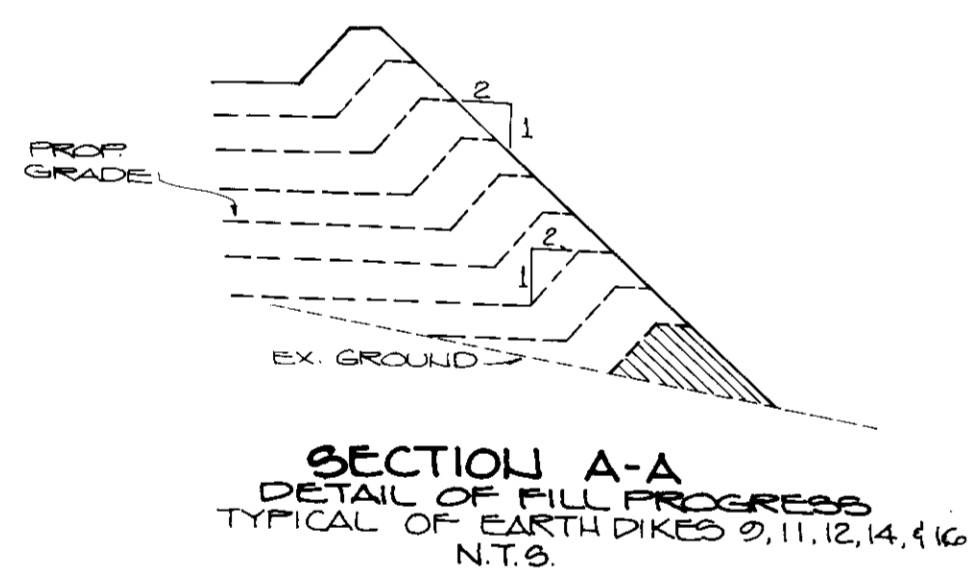


EMERGENCY SPILLWAY



PROFILES

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



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 DATE: 2/6/91
 U.S. SOIL CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 DATE: 2/6/91
 HOWARD S.C.D.

APPROVED FOR PUBLIC WATER & SEWERAGE SYSTEMS
 HOWARD CO. HEALTH DEPT.
 DATE: 1-6-92

APPROVED FOR PUBLIC WATER, SEWERAGE, STORM DRAINAGE SYSTEM & ROADS, HOWARD CO. DEPT. PUBLIC WORKS.
 DATE: 2/2/91

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 DATE: 1/24/92

CHIEF, BUREAU OF ENGINEERING MK
 DATE: 4-2-91

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
 DATE: 2/7/92

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

DESIGNED: J.J.D.
 DRAWN: MDD
 CHECKED: D.N.M.
 DATE: 4/25/90

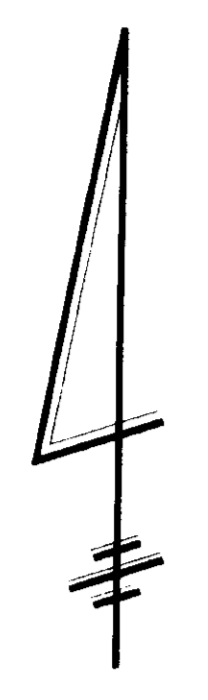
COLUMBIA GATEWAY
 A PORTION OF PARCEL "T"
 STORMWATER
 MANAGEMENT PROFILES/
 FILL SLOPE DETAILS

SCALE: AS SHOWN
 DRAWING: 17
 JOB NO.: 0189246
 FILE NO.:

6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

N 490250
E 816250



PARCEL "S"

PARCEL "T"

STD CONST. ENTRANCE
10' x 50'

GATEWAY DRIVE

COLUMBIA

ROUTE 95
INTERSTATE

PARCEL "T"

LIMIT OF SUBMISSION

LIMIT OF SUBMISSION

500 YEAR FLOOD
PLAIN & DRAINAGE
EASEMENT
FLAT # 6403

DRAINAGE AREA "A"

DRAINAGE AREA "B"

DRAINAGE AREA "C"

LIMIT OF 25% OR GREATER SLOPES



KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED: JJD
DRAWN: MDD
CHECKED: DJM
DATE: 4/23/92
**COLUMBIA GATEWAY
PORTION OF PARCEL "T"
DRAINAGE AREA MAP
EXISTING CONDITIONS**
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

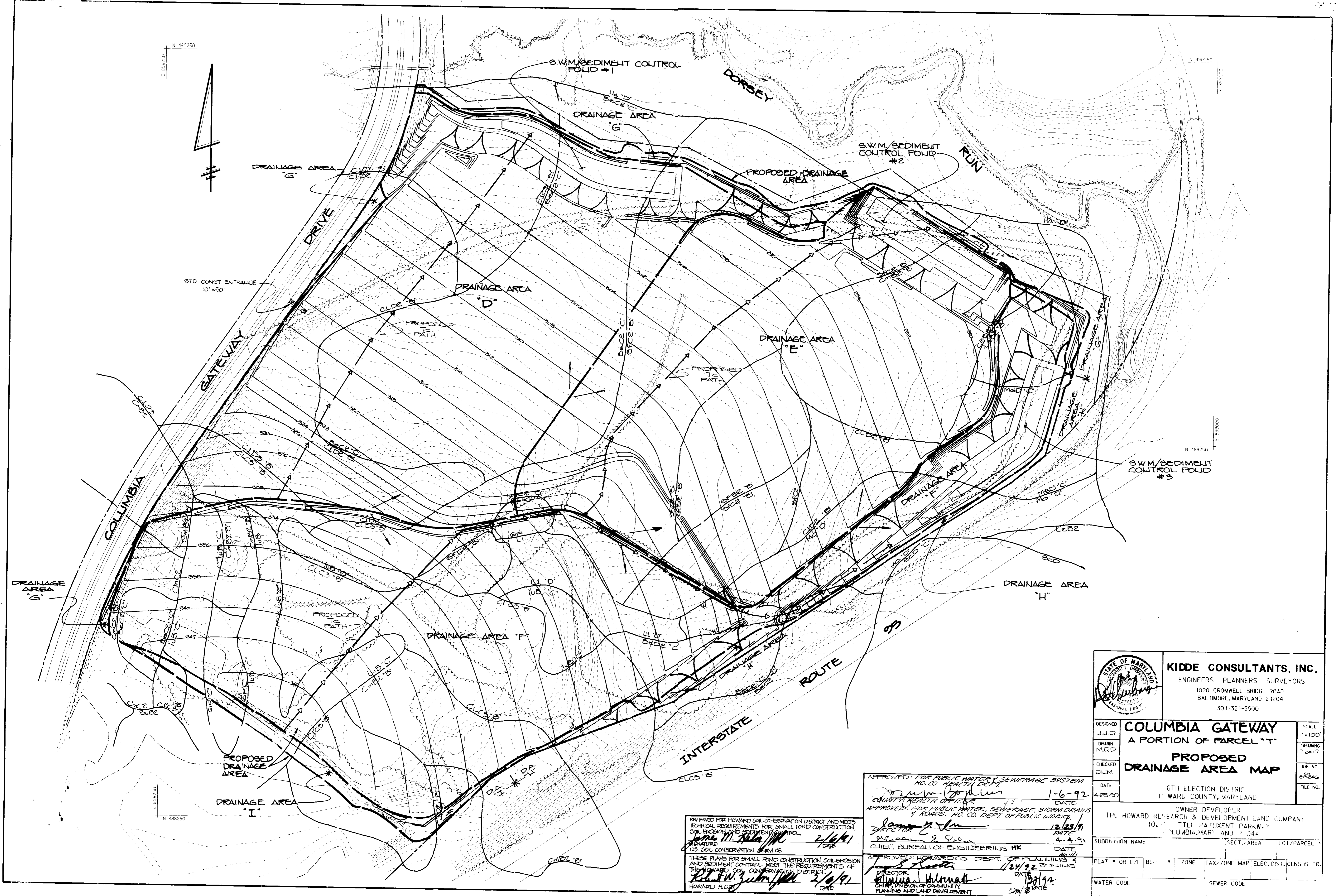
OWNER DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
SUBDIVISION NAME: [] SECTION: [] LOT/PARCEL: []
PLAT: [] OR: [] TAX/ZONE: [] EC. DIST. CENSUS TR.: []
WATER CODE: [] NFR: []

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
[Signature] 2/6/91
DATE
U.S. SOIL CONSERVATION SERVICE

APPROVED FOR PUBLIC WATER & SEWERAGE SYSTEMS
HOWARD CO. HEALTH DEPT.
[Signature] 1-6-92
DATE
CO. HEALTH OFFICER
APPROVED FOR PUBLIC WATER, SEWERAGE, STORM DRAINS & PUBLIC ROADS, HO. CO. DEPT. OF PUBLIC WORKS
[Signature] 4/4/91
DATE
CHIEF, BUREAU OF ENGINEERING MK

APPROVED: HOWARD CO. DEPT. OF PLANNING AND
[Signature] 1/24/92
DATE
DIRECTOR
[Signature] 1/24/92
DATE
CHIEF, DIVISION OF COMMUNITY
PLANNING AND LAND DEVELOPMENT

SDP 90205

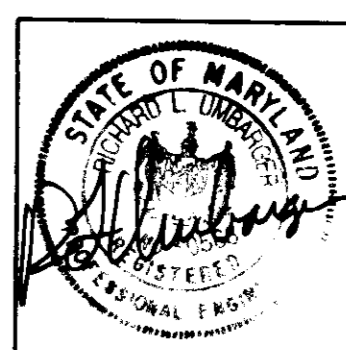


N 490250
E 858240

N 490750
E 858750

N 488250
E 858250

N 489250
E 858000



KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED J.J.D.	COLUMBIA GATEWAY A PORTION OF PARCEL "T" PROPOSED DRAINAGE AREA MAP	SCALE 1" = 100'
DRAWN M.C.D.		DRAWING 7.0017
CHECKED D.J.M.		JOB NO. SDP 90-205
DATE 4.25.90		FILE NO.

OWNER DEVELOPER THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY 10100 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
SUBDIVISION NAME	SECTION, AREA LOT/PARCEL
PLAT OR L/F BL.	ZONE TAX/ZONE MAP ELEC. DIST. CENSUS TR.
WATER CODE	SEWER CODE

APPROVED FOR PUBLIC WATER & SEWERAGE SYSTEM
NO. CO. HEALTH DEPT.
James J. D. DATE 1-6-92
COUNTY HEALTH OFFICER
APPROVED FOR PUBLIC WATER, SEWERAGE, STORM DRAINS & ROADS. NO. CO. DEPT. OF PUBLIC WORKS.
James J. D. DATE 4-4-91
DIRECTOR
CHIEF, BUREAU OF ENGINEERING MK

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
James W. Zuber DATE 2/6/91
SIGNATURE U.S. SOIL CONSERVATION SERVICE
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Robert W. Zuber DATE 2/6/91
HOWARD S.C.D. ENGINE

APPROVED: HOWARD CO. DEPT. OF PLANNING & ZONING
James J. D. DATE 11/24/92
DIRECTOR
James J. D. DATE 11/24/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

STORM WATER MANAGEMENT
POND CONSTRUCTION SPECIFICATIONS

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT AND STRUCTURAL PURPOSES SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED.

AREAS TO BE COVERED BY THE POND OR RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, CROPPERS AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNED ON THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DEPOSITED OUTSIDE THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE.

EARTH FILL & SEE NOTE #16 ON SHEET #1

MATERIAL
THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREA OR AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZE STONES, FROZEN OR OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION WHICH PROVIDES FOR ANTICIPATED SETTLEMENT TO THE DESIGN ELEVATION.

PLACEMENT
AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN 8-INCH MAXIMUM THICKNESS BEFORE COMPACTION LAYERS. THE DEPTH OF THE MOST PORTION OF BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT.

COMPACTION
THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT IS COMPACTED TO 95 PERCENT OF AASHTO SPECIFICATION 1-99 FOR UNDESIGNED ASTM SPECIES. COMPACTION SHALL BE CERTIFIED BY THE ENGINEER. FILL MATERIAL MUST CONTAIN ENOUGH MOISTURE TO YIELD THE REQUIRED DEGREE OF COMPACTION WITH THE EQUIPMENT USED.

CUTOFF TRENCH
WHERE SPECIFIED, A CUTOFF TRENCH SHALL BE EXCAVATED ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS, THE BOTTOM WIDTH OF THE TRENCH SHALL BE AS SHOWN ON THE DRAWINGS, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE FOUR FEET OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE THE MOST IMPERVIOUS MATERIAL AVAILABLE AND SHALL BE COMPACTED WITH EQUIPMENT OR ROLLERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

CONCRETE

CONCRETE MUST MEET MINIMUM REQUIREMENTS SET FORTH IN THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS, SECTION 918 PORTLAND CEMENT CONCRETE MIXTURES, MIX NO. 10. REINFORCING STEEL MUST BE ASTM A615, GRADE 60, STEEL ANGLES AND ANCHOR BARS MUST BE ASTM A36.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SLOPE AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IF REQUIRED IN ACCORDANCE WITH THE VEGETATIVE TREATMENT SPECIFICATIONS ON AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.

FENCE AND GATE (42-INCH HEIGHT)

CONSTRUCT FENCING IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATION STANDARD DETAILS 690.01 AND 690.02. USE SPECIFICATIONS FOR A 6-FOOT FENCE, SUBSTITUTING 42-INCH FABRIC AND 6 FOOT 8 INCH LINE POSTS. CONSTRUCT THE GATE IN ACCORDANCE WITH STATE HIGHWAY ADMINISTRATION STANDARD DETAIL 692.01 WITH 42-INCH FABRIC. THE FABRIC USED FOR THE FENCE AND GATE MUST CONFORM TO AASHTO DESIGNATION M18174.

A MINIMUM ACCESS GATE OF 18 FEET SHALL BE PROVIDED WHEN ACCESS IS NECESSARY TO THE GATE. A 24-FOOT GATE SHALL BE PROVIDED WHEN ACCESS IS NEEDED.

FILTER CLOTH

FILTER CLOTH SHALL BE MIRAFL 1405, DUPONT TYPAR 3341 OR APPROVED EQUAL. SEE BALTO. CO. STD. 20.25-5.

GARBONS

ALL GARBONS SHALL BE CLASS IV (PVC COATED).

PLASTIC

ALL PVC PLASTIC MATERIALS SHALL CONFORM TO ASTM D-1785.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CONCENTRIC TRASH RACK

1. MATERIALS - THE PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED STEEL OR ALUMINUM AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-36 B OR M-196 WITH WATER TIGHT COUPLING BANDS.

DEVELOPER'S/LANDOWNER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL PROPOSED WORK SHOWN ON THESE CONSTRUCTION DRAWINGS AND ON THE APPROVED SEGMENT CONTROL DRAWINGS WILL BE ACCOMPLISHED PURSUANT TO THESE PLANS. I/WE ALSO UNDERSTAND THAT IT IS MY/OUR RESPONSIBILITY TO HAVE THE CONSTRUCTION SUPERVISED AND CERTIFIED, INCLUDING THE SUBMITTAL OF AS-BUILT PLANS WITHIN THIRTY (30) DAYS OF COMPLETION, BY A REGISTERED PROFESSIONAL ENGINEER.

SIGNED: *[Signature]* DATE: 5-10-90

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE MINIMUM STANDARD REQUIREMENTS OF S.C.S. POND STANDARD MD-378, THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

SIGNED: *[Signature]* DATE: 5/14/90

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDING PREPARATION:
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

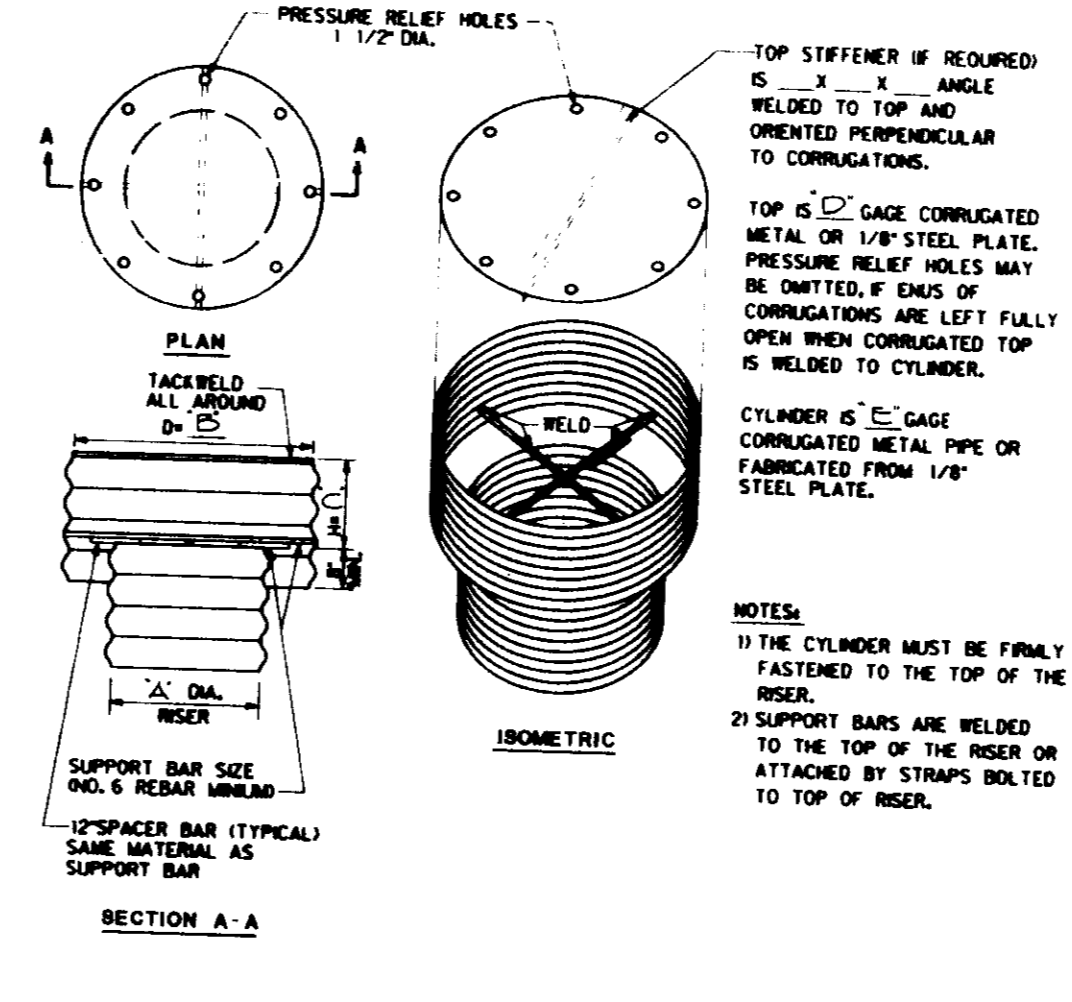
SOIL AMENDMENTS:
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1,000 SQ. FT.) AND 500 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 38-0-0 UREA FORM FERTILIZER (9 LBS./1,000 SQ. FT.) AND 500 LBS. PER ACRE (11.5 LBS./1,000 SQ. FT.) OF 10-20-20 FERTILIZER.

SEEDING:
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 400 LBS. PER ACRE 0-3 LBS./1,000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ. FT.) OF WHEATGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SHOWN AS SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE WHEATGRASS.

MULCHING:
APPLY 1/2 TO 2 TONS PER ACRE (70 TO 300 LBS./1,000 SQ. FT.) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE 15 GAL./1,000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR MORE USE 300 GALLONS PER ACRE 18 GAL./1,000 SQ. FT.) FOR ANCHORING.

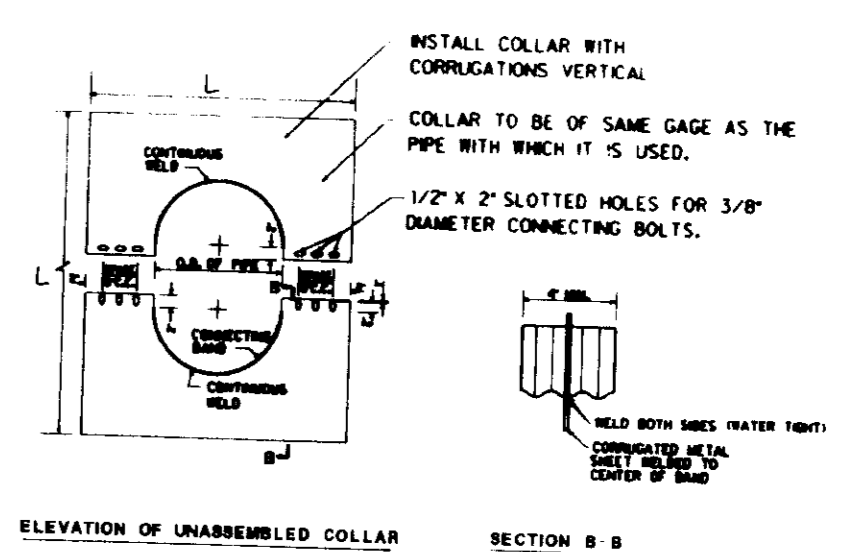
MAINTENANCE:
INSPECT ALL SEEDER AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

FOR PUBLIC PONDS, SUBSTITUTE CHEMICAL CROWNSHATCH AT 15 LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS./ACRE AS THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.



CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

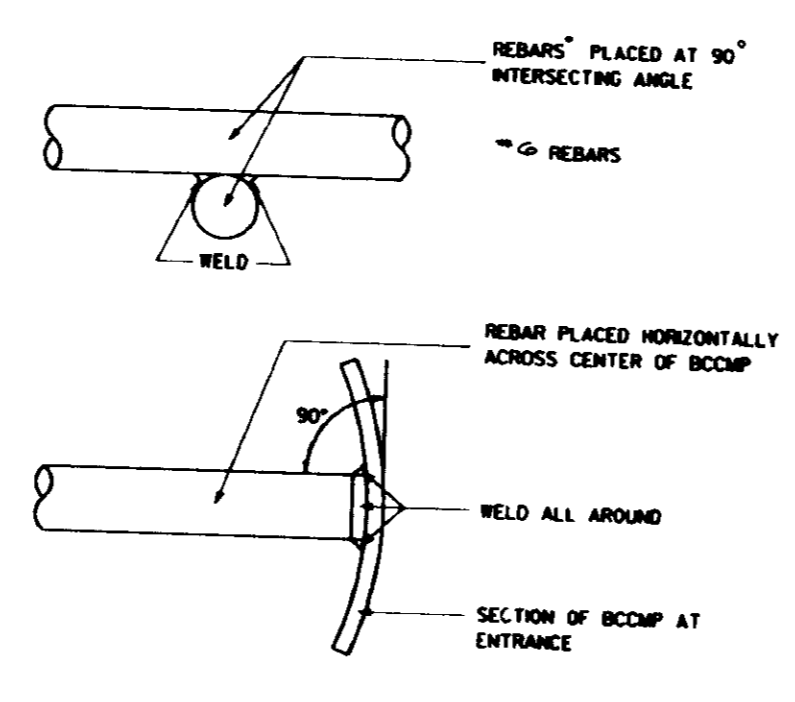
	POUND #1	POUND #2	POUND #3
A	30'	30'	30'
B	48'	48'	48'
C	16'	16'	16'
D	12'	12'	12'
E	14'	14'	14'



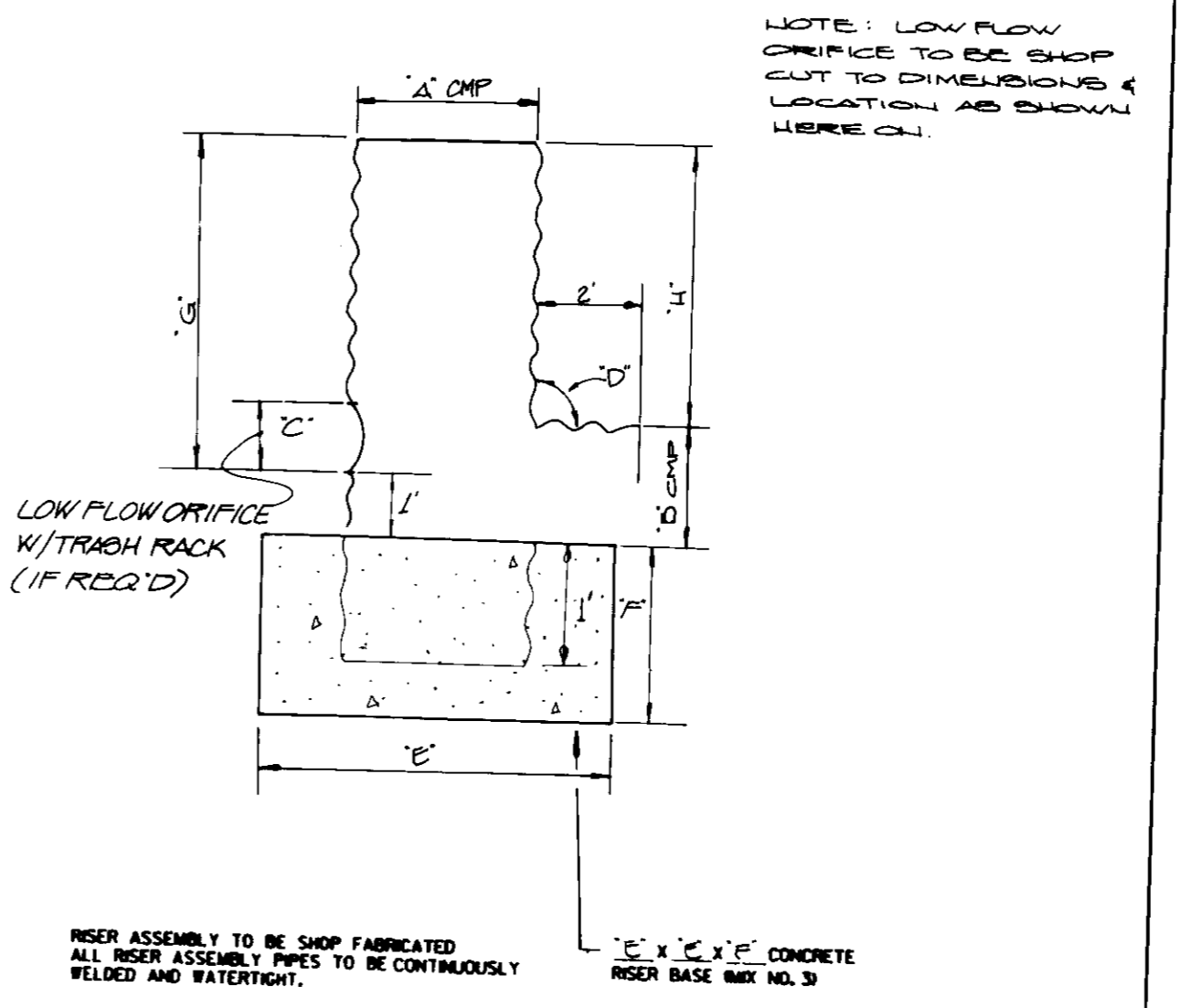
CORRUGATED METAL ANTI-SEEP COLLAR DETAIL

NOTES FOR COLLARS:
1. ALL MATERIALS TO BE IN ACCORDANCE WITH CONSTRUCTION AND CONSTRUCTION MATERIAL SPECIFICATIONS.
2. WHEN SPECIFIED ON THE PLANS, COATING OF COLLARS SHALL BE IN ACCORDANCE WITH CONSTRUCTION AND CONSTRUCTION MATERIAL SPECIFICATIONS.
3. UNASSEMBLED COLLARS SHALL BE MARKED BY PAINTING OR TAGGING TO IDENTIFY MATCHING PARTS.
4. THE LAP BETWEEN THE TWO HALF SECTIONS AND BETWEEN THE PIPE AND CONNECTING BAND SHALL BE CALKED WITH ASPHALT MASTIC AT THE TIME OF INSTALLATION.
5. EACH COLLAR SHALL BE FURNISHED WITH TWO 1/2" DIAMETER RODS WITH STANDARD TANK LUGS FOR CONNECTING COLLARS TO PIPE.

POUND #	L
1	6x6.5
2	7.0-7.0
3	7.5-7.5



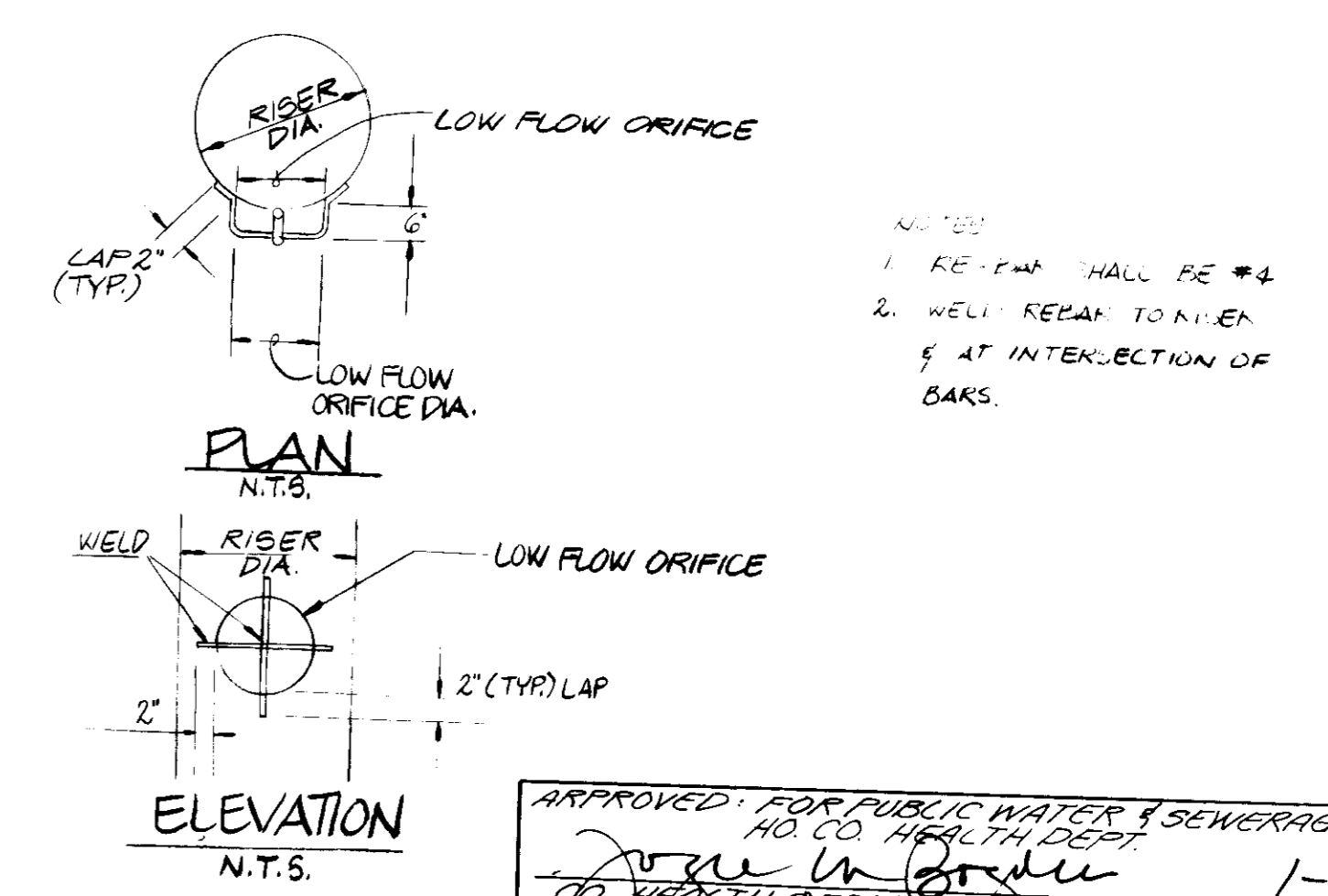
TRASH RACK WELDING DETAIL



RISER ASSEMBLY DETAIL

POUND	RISER	BARREL	LOW FLOW	ANGLE	WIDTH	HEIGHT	G	H
1	30'	21'	6"	90° 46.24	48" x 48"	1.8	3.0	1.25'
2	30'	21'	6"	90° 38.30	48" x 48"	1.8	4.0	2.25'
3	30'	21'	12"	91° 31.05	48" x 48"	1.8	3.5	1.75'

* TRASH RACK REQUIRED (SEE DETAIL THIS SHEET)



LOW FLOW TRASH RACK

APPROVED: FOR PUBLIC WATER & SEWERAGE HO. CO. HEALTH DEPT. DATE: 1-6-92
 APPROVED: FOR PUBLIC WATER, SEWER, STORM DRAINS & ROADS, HOWARD CO. DEPT. OF PUBLIC WORKS. DATE: 12/23/91
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING. DATE: 1/24/92

DESIGN SUMMARY

FACILITY DESIGNATION	DESIGN STORAGE	WATER SURFACE ELEVATION	STORAGE VOL. (CAG - F6)
1	2 YR	269.94	2,087
	10 YR	271.55	3,421
2	2 YR	258.44	2,010
	10 YR	257.42	3,323
3	2 YR	255.61	2,182
	10 YR	251.65	3,681

FACILITY DESIGNATION	DESIGN STORAGE	PRE-DESIGN STORAGE (CAG)	POST-DESIGN STORAGE (CAG)
1	2 YEAR	7.58	6.92
	10 YEAR	*	*
2	2 YEAR	*	*
	10 YEAR	23.90	22.07
3	2 YEAR	6.97	5.96
	10 YEAR	23.89	23.39

* EXPLANATION: PONDS 1 & 2 BOTH OPERATE WITHIN THE SAME DRAINAGE AREA, THEREFORE THEIR DISCHARGES ARE COMBINED FOR COMPARISON.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL. DATE: 2/6/91
 U.S. SOIL CONSERVATION SERVICE
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. DATE: 2/6/91

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

COLUMBIA GATEWAY
 A PORTION OF PARCEL "T"
STORMWATER MANAGEMENT DETAILS
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOO

- SPECIFICATIONS**
- CLASS OF TURFGRASS SOO SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOO.
 - SOO SHALL BE MACHINE CUT AT A UNIFORM SOO THICKNESS OF 3/4 INCH PLUS OR MINUS 1/4 INCH AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH THAT IS NOT TO BE USED.
 - STANDARD SIZE SECTIONS OF SOO SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 - INDIVIDUAL PIECES OF SOO SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT. BROKEN PADS AND TORN OR UNEVEN EDGES WILL NOT BE ACCEPTABLE.
 - SOO SHALL NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT EXCESSIVELY DRY OR WET MAY AVERSELY AFFECT ITS SURVIVAL.
 - SOO SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOO NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.

- SITE PREPARATION**
- PRIOR TO SOODING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER MAINTENANCE OPERATIONS.
 - WHERE THE SOO IS ADD OR COMPOSED OF HEAVY CLAYS, GROUND LESTONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1000 SQUARE FEET. IN ALL SOO'S 100 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORM APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOO WITH THE REQUIRED LINE.
 - ALL AREAS RECEIVING SOO SHALL BE UNIFORM FIRE GRADED. HARD-PACKED EARTH SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SOO.

- SOO INSTALLATION**
- DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOO SHALL BE LOOSELY SPACED IMMEDIATELY PRIOR TO LAYING OF SOO.
 - THE FIRST ROW OF SOO SHALL BE Laid IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY REDED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM OVERLAP AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT Voids WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
 - ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOO SHALL BE Laid WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOO BY TAMPING AND PEGGING OR OTHER APPROVED METHODS.
 - AS SOODING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE SOO CONTACT WITH ROOTS WITH THE SOO SURFACE. SOO SHALL BE WATERED IMMEDIATELY AFTER ROLLING OR TAMPING UNTIL THE UNDERSIDE OF THE NEAR SOO PAD AND SOO SURFACE BELOW THE SOO ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOO SHALL BE COMPLETED WITHIN EIGHT HOURS.

- SOO MAINTENANCE**
- IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOISTURE. WATERING SHOULD BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING.
 - AFTER THE FIRST WEEK, SOO SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND INSURE ESTABLISHMENT.
 - FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOO IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.
 - MAINTENANCE OF ESTABLISHED SOO SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE 54-1.

OWNERS/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND PROJECT THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT, ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

DEVELOPER: *Albert Edwards, LLC* DATE: 5-10-90

PRINT NAME, TITLE, FIRM & ADDRESS

CONSULTANT'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: *Richard L. Lindberger* MD. LICENSE NO. 10000
NAME: RICHARD L. LINDBERGER DATE: 5/11/90

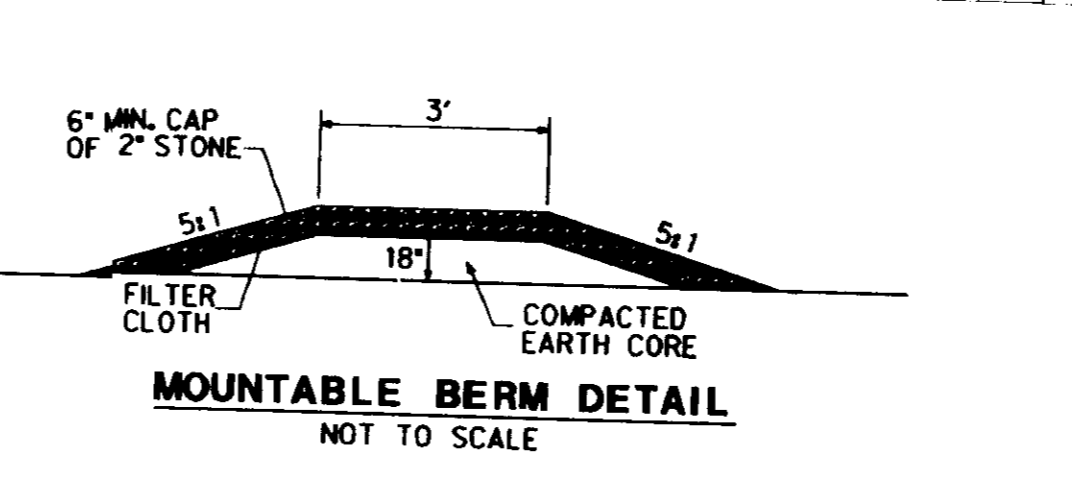
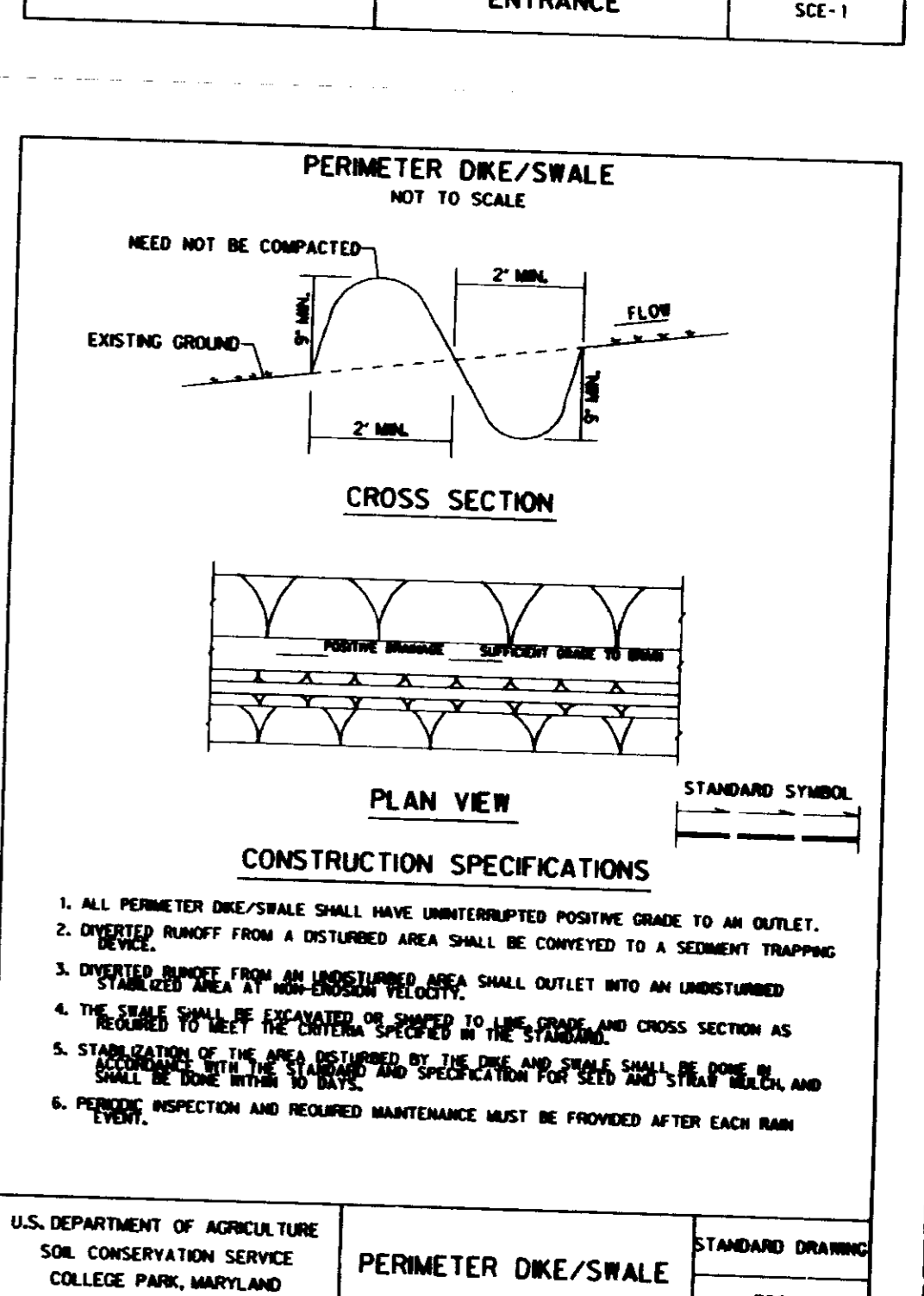
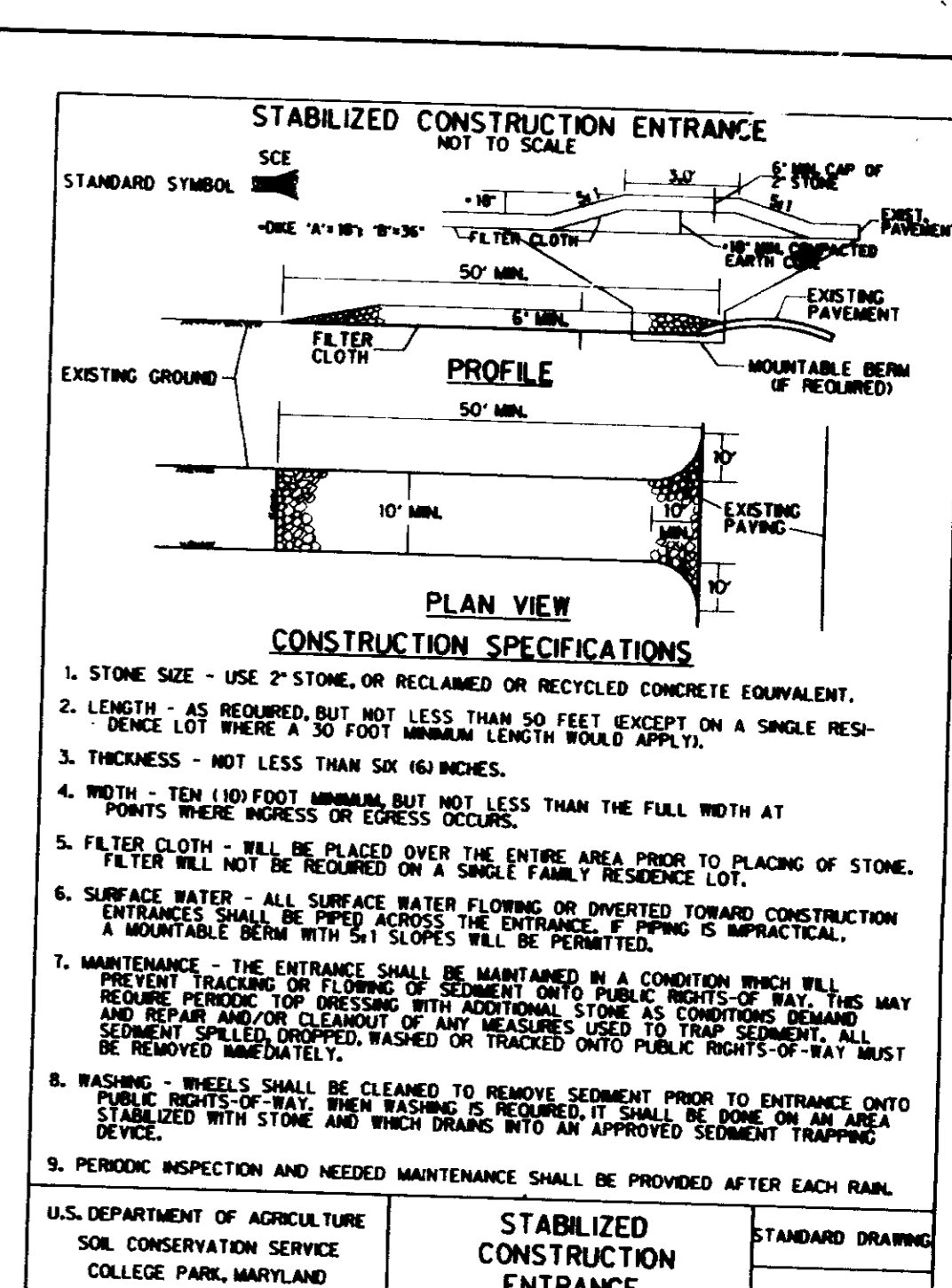
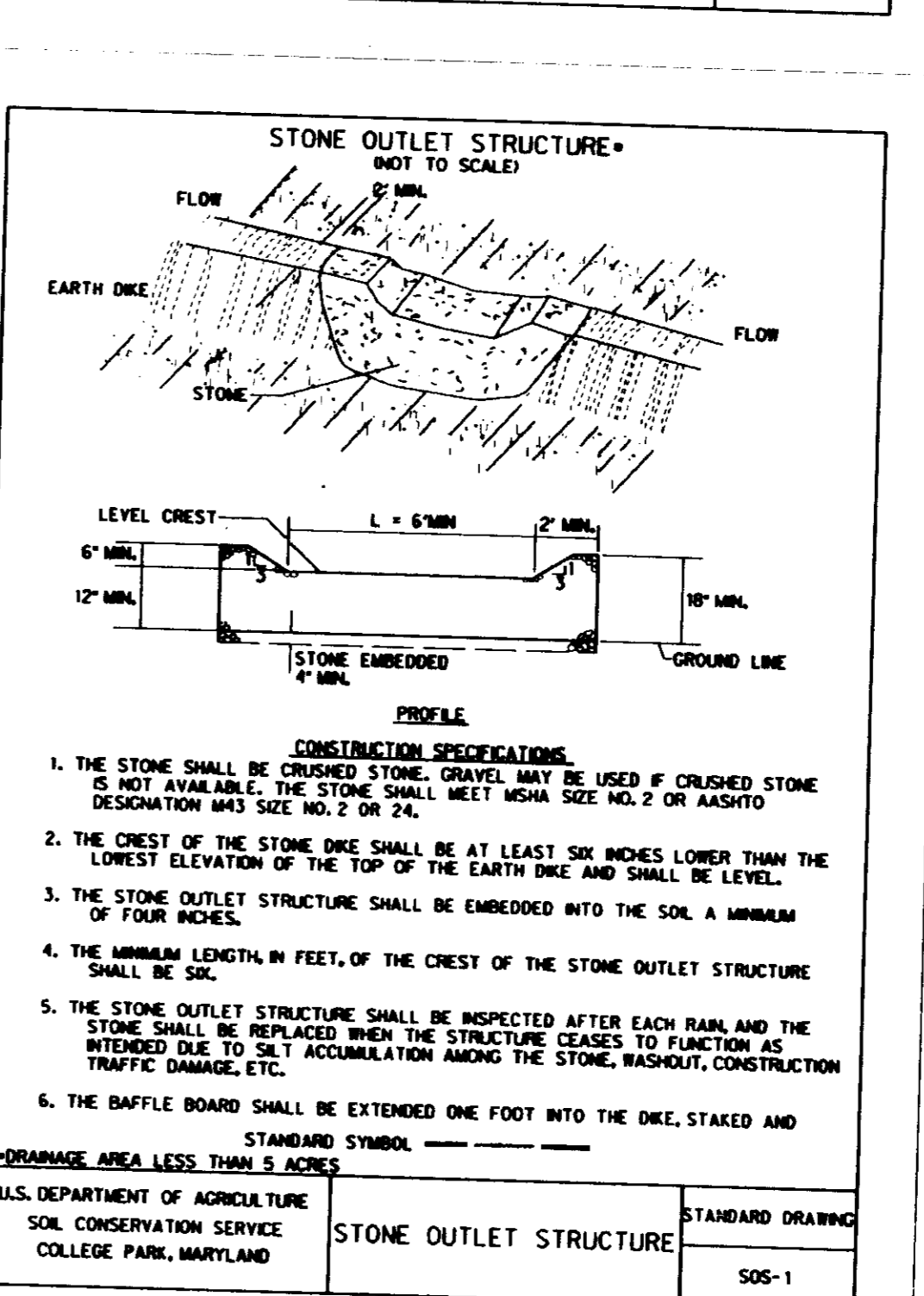
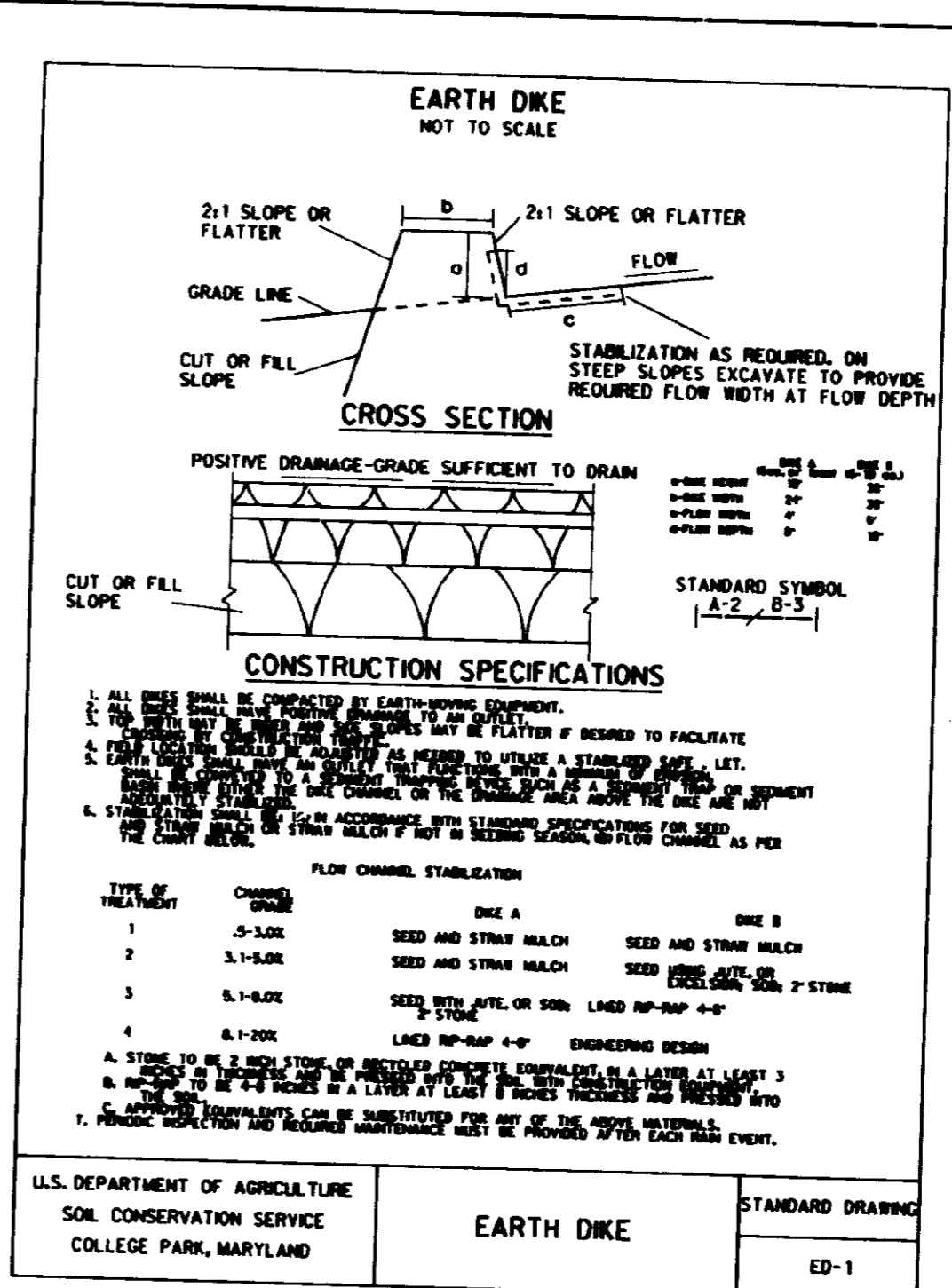
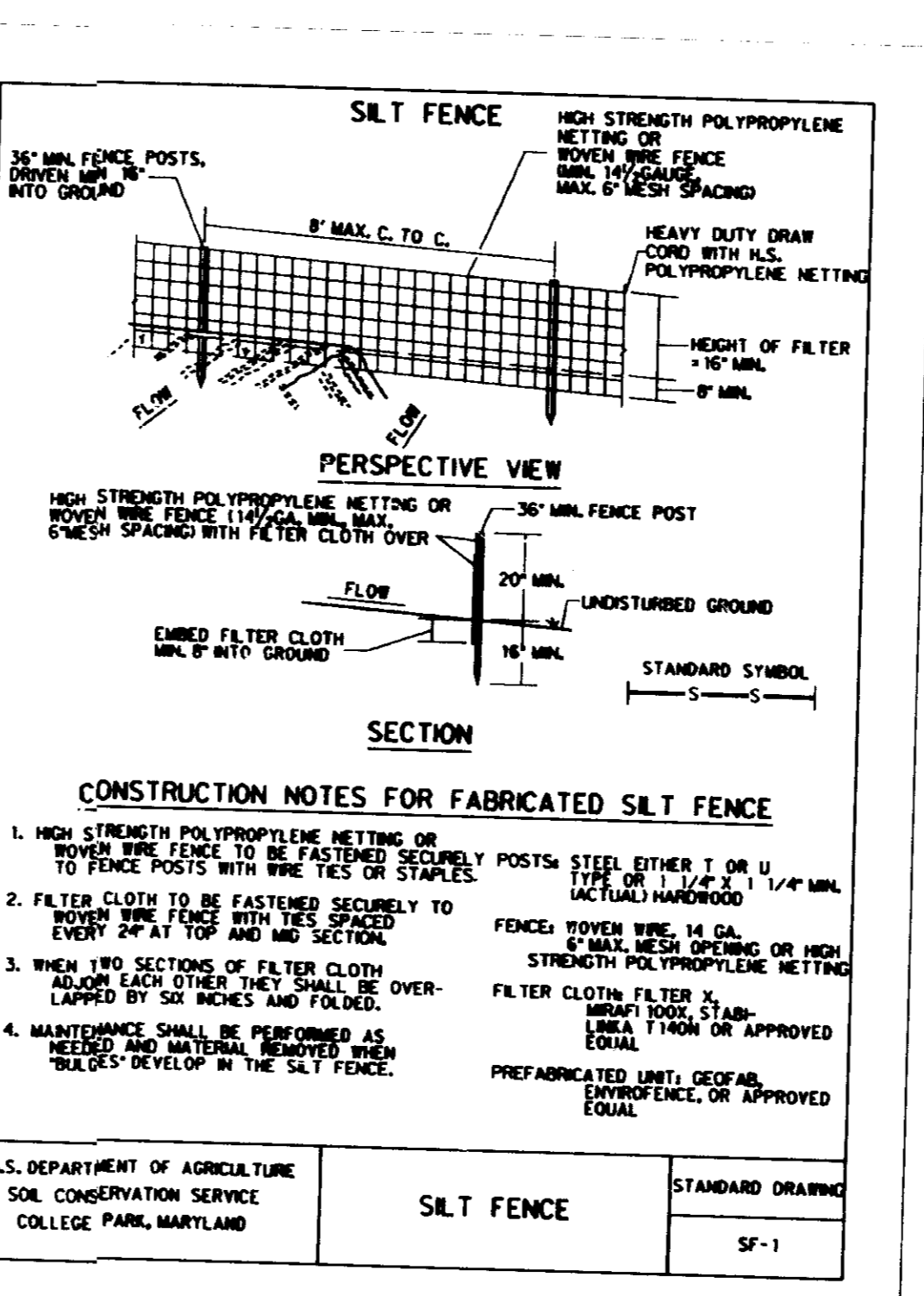
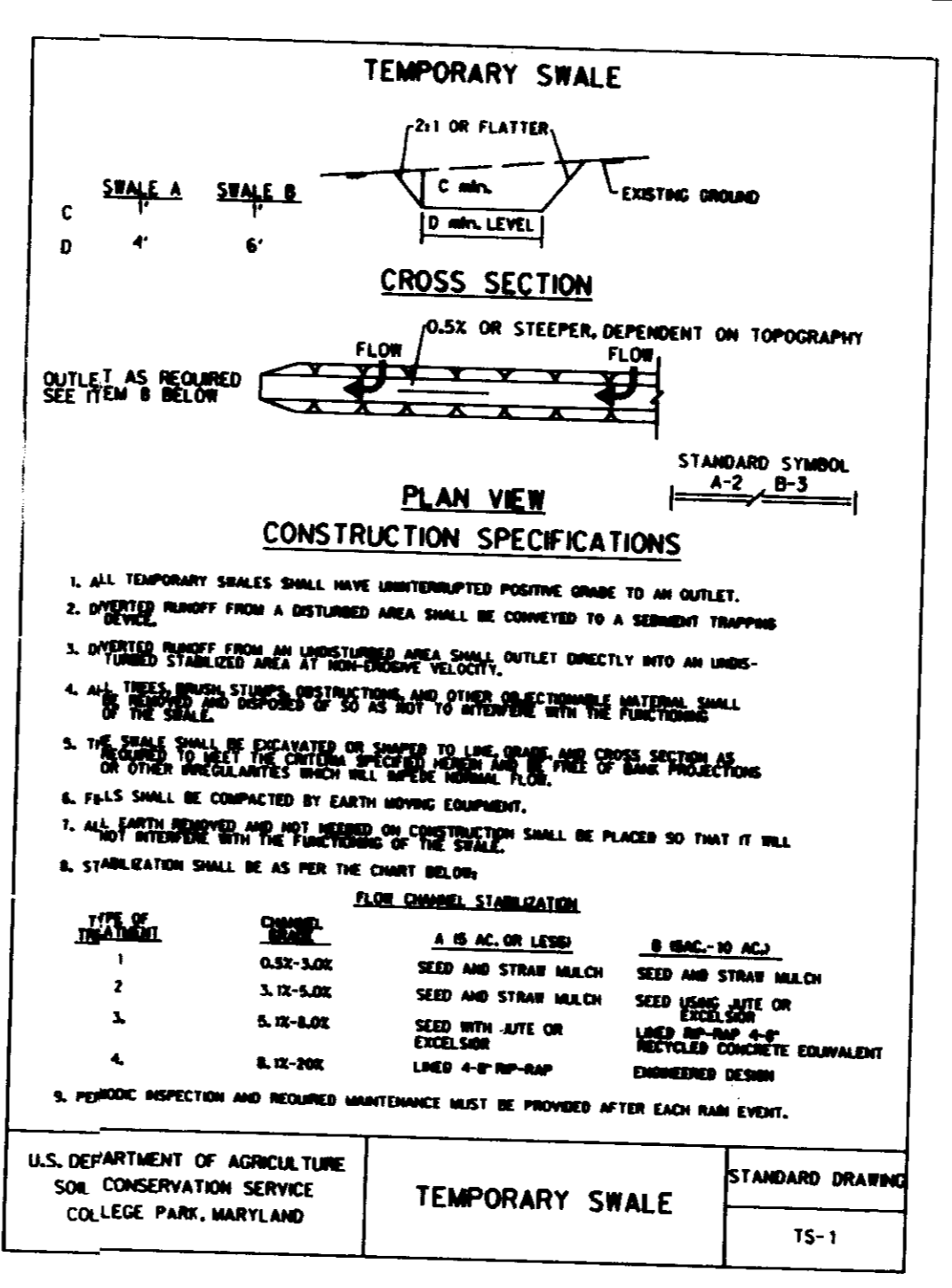
- REFER TO '1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL' FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN.
- WITH THE APPROVAL OF SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN AND WILL BE MADE TO INSURE THE CONTROL OF ANY SEDIMENT CHANGES IN SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
- AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL PRACTICES SHALL BE INSPECTED AND LEFT IN OPERATIONAL CONDITION.
- FOLLOWING INITIAL SOO DISTURBANCE OR RE-DISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (A) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND (B) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO HOWARD COUNTY SOIL CONSERVATION DISTRICT FOR APPROVAL.
- DUST CONTROL WILL BE PROVIDED FOR ALL DISTURBED AREAS. REFER TO '1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL', P.P. 52.01 AND 52.02 FOR ACCEPTABLE METHODS AND SPECIFICATIONS FOR DUST CONTROL.
- ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.
- ANY EXCESS CUT OR BORROW MATERIAL WILL BE TAKEN TO OR BROUGHT FROM A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN.
- TOTAL AREA OF TRACT: 172.916 AC
- TOTAL DISTURBED AREA: 650 AC
- REFER TO 'MARYLAND GUIDELINES TO WATERWAY CONSTRUCTION' BY THE WATER RESOURCES ADMINISTRATION (WRA), DATED JANUARY, 1986 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.

- SEDIMENT CONTROL NOTES**
- 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.
 - All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within 7 calendar days of disturbance. Sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1 to 14 days as to other disturbed or graded areas on the project site.
 - All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 16 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
 - All disturbed areas must be stabilized within the time period specified in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings and seeding (Sec. 50). Temporary stabilization with cuttings can only be done when recommended seeding placement of grasses.
 - All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
 - Site Analysis:
Total Area of Site: 172.916 Acres
Area Disturbed: 650 Acres
Area to be vegetatively stabilized: 650 Acres
Total Fertilizer: 1000 Cyls.
Off-site waste/borrow area location: *NA*
 - Any sediment control practice which is disturbed by on-site activity for placement of utilities must be repaired on the same day of disturbance.
 - Additional sediment controls must be provided if deemed necessary by the Howard County DPW sediment control inspector.
 - On all areas with disturbed areas in excess of 2 acres, approval of the inspection agency should be requested upon completion of construction. After construction and sediment control, but before proceeding with any grading, inspection approval may not be required if the initial approval by the inspection agency is made.

- TEMPORARY SEEDING NOTES**
- SEEDING PREPARATION:
LOOSEN UPPER 3 INCHES OF SOIL BY DISCING, RAKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:
APPLY 600 LBS. PER ACRE (14 LBS./1000 SQ. FT.) OF 10-10-10 FERTILIZER.
- SEEDING:
FOR PERIODS MARCH 1 THRU APRIL 30, AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 1/2 BIL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ. FT.) FOR THE PERIOD MAY 1 THRU AUG. 14, SEED WITH 3 LBS. PER ACRE OF 10-10-10 FERTILIZER. FOR PERIOD NOV. 16 THRU FEB. 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 SOO.
- MULCHING:
APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNMOTTLED SMALL GRAM STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 2 1/2 GALLONS PER ACRE (5 GALLONS/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 3 FEET OR HIGHER USE 3/8 GALLONS PER ACRE (8 GALLONS/1000 SQ. FT.) FOR ANCHORING.

- PERMANENT SEEDING NOTES**
- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDING PREPARATION:
LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:
APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ. FT.) BEFORE SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 UREA FORM FERTILIZER (9 LBS./1000 SQ. FT.).
- SEEDING:
FOR 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 OF MAY 1 THRU JULY 31, SEED WITH 60 LBS. SQ. FT.) OF WHEAT. FOR PERIODS NOV. 16 THRU FEB. 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOO OPTION (3) SEED WITH 60 LBS. OF 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 UNMOTTLED SMALL GRAM STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 2 1/2 GALLONS PER ACRE (5 GALLONS/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 3 FEET OR HIGHER USE 3/8 GALLONS PER ACRE (8 GALLONS/1000 SQ. FT.) FOR ANCHORING.

- GENERAL NOTES**
- REFER TO '1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL' FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN.
 - WITH THE APPROVAL OF SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN AND WILL BE MADE TO INSURE THE CONTROL OF ANY SEDIMENT CHANGES IN SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 - AT THE END OF EACH WORKING DAY ALL SEDIMENT CONTROL PRACTICES SHALL BE INSPECTED AND LEFT IN OPERATIONAL CONDITION.
 - FOLLOWING INITIAL SOO DISTURBANCE OR RE-DISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (A) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND (B) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO HOWARD COUNTY SOIL CONSERVATION DISTRICT FOR APPROVAL.
 - DUST CONTROL WILL BE PROVIDED FOR ALL DISTURBED AREAS. REFER TO '1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL', P.P. 52.01 AND 52.02 FOR ACCEPTABLE METHODS AND SPECIFICATIONS FOR DUST CONTROL.
 - ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.
 - ANY EXCESS CUT OR BORROW MATERIAL WILL BE TAKEN TO OR BROUGHT FROM A SITE WITH AN APPROVED SEDIMENT CONTROL PLAN.
 - TOTAL AREA OF TRACT: 172.916 AC
 - TOTAL DISTURBED AREA: 650 AC
 - REFER TO 'MARYLAND GUIDELINES TO WATERWAY CONSTRUCTION' BY THE WATER RESOURCES ADMINISTRATION (WRA), DATED JANUARY, 1986 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

SIGNATURE: *Robert W. Zickler* DATE: 2/6/91
U.S. SOIL CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE: *Robert W. Zickler* DATE: 2/6/91
HOWARD S.C.D.

APPROVED FOR PUBLIC WATER & SEWERAGE SYSTEM HOWARD CO HEALTH DEPT. DATE: 1-6-92

APPROVED FOR PUBLIC WATER, SEWER, STORM DRAIN AND ROADS HOWARD CO. DEPT OF PUBLIC WORKS DATE: 12/23/91

APPROVED HOWARD COUNTY DEPT. OF PLANNING AND ZONING DATE: 1/24/92

KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

COLUMBIA GATEWAY
A PORTION OF PARCEL "T"

STORMWATER MANAGEMENT DETAILS

6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DESIGNED: JJD
DRAWN: MDD
CHECKED: CLM
DATE: 4-25-90

SCALE: AS SHOWN
DRAWING: 9 OF 17
JOB NO.: C0846
FILE NO.:

SDP 90 205

- PHASE I
1. OBTAIN GRADING PERMIT.
 2. NOTIFY HOWARD COUNTY SEDIMENT CONTROL INSPECTOR 24 HOURS BEFORE BEGINNING WORK.
 3. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
 4. CLEAR AND GRUB FOR PHASE I SEDIMENT CONTROL DEVICES.
 5. INSTALL SILT FENCE # 1, PERIMETER DIKE/SWALE # 1 AND STONE OUTLET STRUCTURE # 1 WITH ADJOINING EARTH DIKE # 1.
 6. CLEAR EXISTING SWALE OF BRUSH AND DEBRIS (NO EXCAVATION).
 7. EXTEND EXISTING 24" CMP BEYOND LIMITS OF SILT FENCE AND MAINTAIN 24" CMP AS A CLEAN WATER BY-PASS.
 8. CONSTRUCT EARTH DIKE # 2, MAINTAINING POSITIVE FLOW TO 24" D.
 9. CONSTRUCT STORMWATER MANAGEMENT/SEDIMENT CONTROL POND # 1.
 10. ABANDON 24" CMP AND RE-DIRECT FLOW TO POND. DIKE OUTLET AT POND ENDWALL SHALL BE STABILIZED AS REQUIRED TO MINIMIZE EROSION OF POND SLOPE. REMOVE 60 S.W.

- PHASE II
1. CLEAR AND GRUB FOR PHASE II SEDIMENT CONTROL DEVICES.
 2. CONSTRUCT SILT FENCE # 2, EARTH DIKE # 3, AND STONE OUTLET STRUCTURE # 2.
 3. CONSTRUCT STORMWATER MANAGEMENT/SEDIMENT CONTROL POND # 2.

- PHASE III
1. CLEAR AND GRUB FOR PHASE III SEDIMENT CONTROL DEVICES.
 2. CONSTRUCT SILT FENCE # 3 AND THE PORTION OF EARTH DIKE # 4 FROM POND # 2 TO S.O.S. # 2. REMOVE EARTH DIKE # 3, RE-DIRECT RUNOFF TO POND # 2. AND INSTALL REMAINDER OF EARTH DIKE # 4. CONSTRUCT EARTH DIKE # 5, RE-DIRECTING FLOW FROM POND # 1 TO POND # 2 BY REMOVING EARTH DIKE # 2 AT THE INTERSECTION OF THE TWO DIKES. DIKE OUTLET AT POND ENDWALL SHALL BE STABILIZED AS REQUIRED TO MINIMIZE EROSION OF POND SLOPE.
 3. CONSTRUCT STORMWATER MANAGEMENT/SEDIMENT CONTROL POND # 3.

NOTE: UPON COMPLETION OF PHASE III, PONDS # 1 AND 2 SHALL BE FULLY OPERATIONAL AND RECEIVING THEIR FULL DEVELOPED DRAINAGE AREAS. POND # 3 SHALL BE FULLY OPERATIONAL, BUT THE DRAINAGE AREA SHALL BE CONFINED TO THE AREA BENEATH EARTH DIKE # 4 AND ABOVE THE PROPERTY LINE.

- PHASE IV
1. CLEAR AND GRUB FOR PHASE IV SEDIMENT CONTROL DEVICES.
 2. CONSTRUCT EARTH DIKE # 5 ON EXISTING GROUND AS SHOWN AT THE SOUTHERN D.A. LIMIT OF PHASE III. THE DOWNSTREAM END OF THE DIKE SHALL BE POSITIONED SO AS TO ALLOW FILL AT # 11 AND THE CONSTANT PROGRESS OF THE DIKE UP THE SLOPE.
 3. INSTALL SILT FENCE # 4 ALONG COLUMBIA GATEWAY DRIVE.
 4. CLEAR AND GRUB REMAINDER OF AREAS I AND II. BEGIN GRADING OPERATION, LIMITED TO AREAS I AND II.
 5. IN ADDITION TO AREAS I AND II, FILL MAY BE PLACED BETWEEN EARTH DIKE # 4 AND POND # 3. AS FILL DEPTHS INCREASE IN THIS AREA, BEGIN TO DEVELOPE ULTIMATE DRAINAGE CREST FOR POND # 2, WHICH IS EARTH DIKE # 7. (TOP OF THE FILL SLOPE) SEE EASTERN LIMIT OF POND # 2'S DRAINAGE AREA. SEE CROSS SECTION AND PLAN FOR ULTIMATE LOCATION OF EARTH DIKE # 7.

6. AS GRADING PROGRESSES, EARTH DIKES # 13 AND # 14 SHALL BE CONSTRUCTED AND BROUGHT-UP WITH THE FILL SLOPES AND STABILIZED. THE EXISTING SWALE AND PERIMETER DIKE/SWALE # 13 SHALL BE FILLED. THE RUNOFF FROM AREA I SHALL BE TRAPPED BY EARTH DIKE # 13. RUNOFF FROM AREA I SHALL BE FILLED OVER, AS REQUIRED.
7. PIPE SLOPE DRAINS SHALL BE USED TO CARRY FOUR EQUAL PORTIONS OF DRAINAGE AREA # 1 TO POND # 1. PIPES TO BE EXTENDED UP THE SLOPE THROUGH EARTH DIKE # 11. AS FILL PROGRESSES, SEE DETAIL DWT 50P/17.
8. AS GRADING PROGRESSES, EARTH DIKES # 15 AND 16 SHALL BE CONSTRUCTED AND BROUGHT UP WITH THE FILL SLOPES AND STABILIZED. POND SLOPE STABILIZATION SHALL BE MAINTAINED TO PREVENT EARTH DIKES # 7 AND # 16 FROM ERODING POND SLOPE. EARTH DIKE # 4 AND # 5 SHALL BE REMOVED AND/OR FILLED OVER, AS REQUIRED.
9. PIPE SLOPE DRAINS SHALL BE USED TO CARRY RUNOFF FROM EARTH DIKE # 15 TO POND # 1 IN TWO EQUAL PORTIONS. PIPES TO BE EXTENDED UP THE SLOPE THROUGH EARTH DIKE # 15. AS FILL PROGRESSES.

NOTE: FILL, PLACED FROM EARTH DIKE # 6 NORTHWARD, SHALL BE LAID BACK AT A 1 (MIN) 1:1 SLOPE. FLOW DIRECTION SHALL ALWAYS BE TOWARD POND. SEE CROSS SECTION.

- PHASE V
1. CLEAR & GRUB FOR PHASE V SEDIMENT CONTROL DEVICES.
 2. CONSTRUCT EARTH DIKE # 8. BEGIN RIP RAP CHANNEL CONSTRUCTION.
 3. CONSTRUCT EARTH DIKE # 9, WHICH WILL FIRST BE CONSTRUCTED ALONG THE PROPERTY LINE OUTLETING AT EARTH DIKE # 8. AS FILL PROGRESSES, EARTH DIKE # 9 MOVES UP THE SLOPE. THE OUTLET OF THIS DIKE SHALL BE ONTO THE RIP RAP CHANNEL, WHICH PROGRESSIVELY MOVES UP THE SLOPE, WITH THE FILL.
 4. INSTALL SILT FENCE # 5 AND # 6.
 5. INSTALL EARTH DIKE # 10 AND TEMPORARY SWALE # 1. MAINTAINING POSITIVE FLOW TO POND # 3 AT ALL TIMES.
 6. INSTALL TEMPORARY SWALE # 2 AS CLOSE AS POSSIBLE TO FINAL GRADE. DRAINAGE AREAS I AND 2 SHOULD BE GRADED WELL

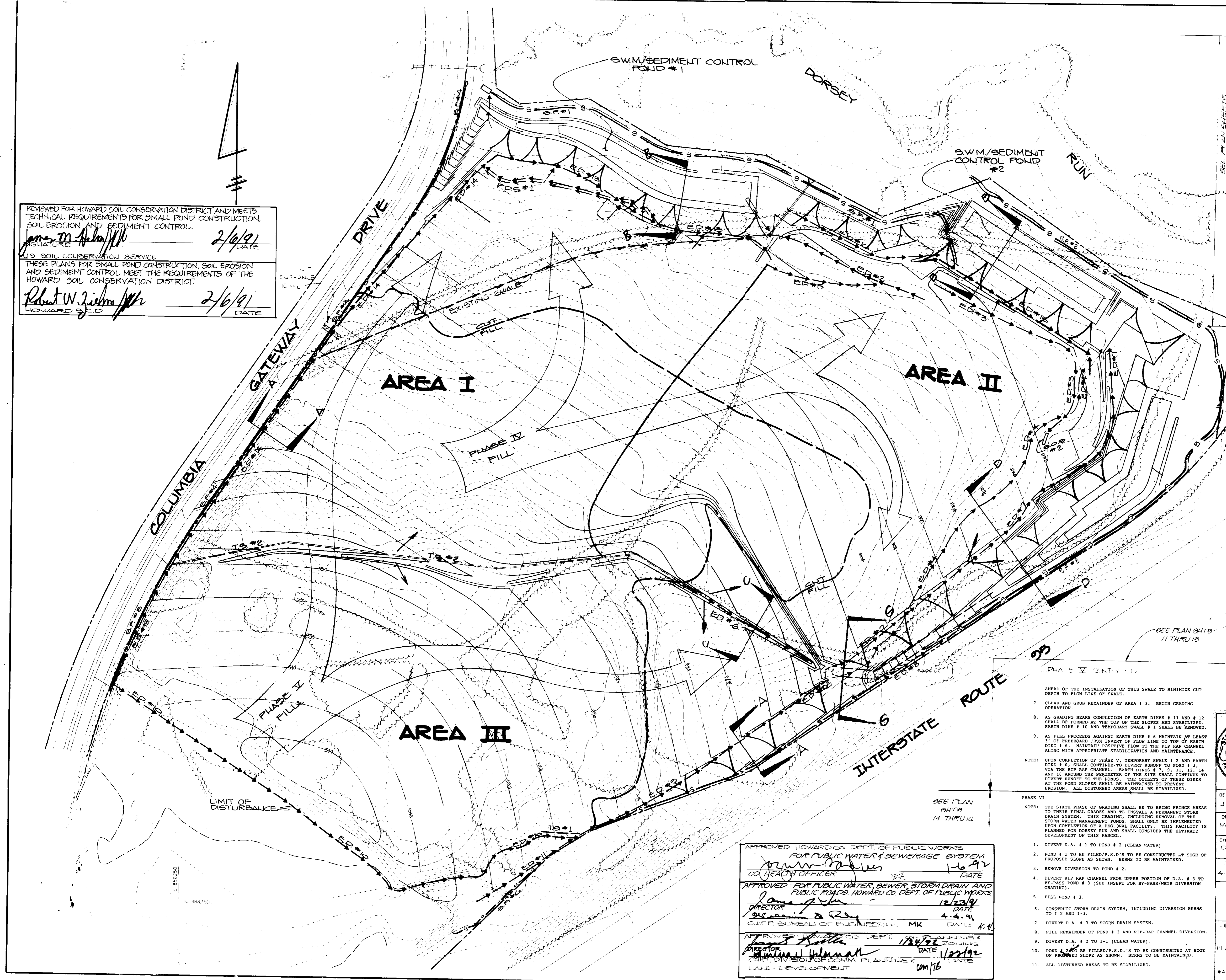
- AHEAD OF THE INSTALLATION OF THIS SWALE TO MINIMIZE CUT DEPTH TO FLOW LINE OF SWALE.
7. CLEAR AND GRUB REMAINDER OF AREA # 3. BEGIN GRADING OPERATION.
 8. AS GRADING NEARS COMPLETION OF EARTH DIKES # 11 AND # 12 SHALL BE FORMED AT THE TOP OF THE SLOPES AND STABILIZED. EARTH DIKE # 10 AND TEMPORARY SWALE # 1 SHALL BE REMOVED.
 9. AS FILL PROCEEDS AGAINST EARTH DIKE # 6 MAINTAIN AT LEAST 3' OF FREEBOARD FROM INVERT OF FLOW LINE TO TOP OF EARTH DIKE # 6. MAINTAIN POSITIVE FLOW TO THE RIP RAP CHANNEL ALONG WITH APPROPRIATE STABILIZATION AND MAINTENANCE.
- NOTE: UPON COMPLETION OF PHASE V, TEMPORARY SWALE # 2 AND EARTH DIKE # 6, SHALL CONTINUE TO DIVERT RUNOFF TO POND # 3, VIA THE RIP RAP CHANNEL. EARTH DIKES # 7, 9, 11, 12, 14 AND 16 AROUND THE PERIMETER OF THE SITE SHALL CONTINUE TO DIVERT RUNOFF TO THE PONDS. THE OUTLETS OF THESE DIKES AT THE POND SLOPES SHALL BE MAINTAINED TO PREVENT EROSION. ALL DISTURBED AREAS SHALL BE STABILIZED.

- PHASE VI
- NOTE: THE SIXTH PHASE OF GRADING SHALL BE TO BRING FRINGE AREAS TO THEIR FINAL GRADES AND TO INSTALL A PERMANENT STORM DRAIN SYSTEM. THIS GRADING, INCLUDING REMOVAL OF THE STORM WATER MANAGEMENT PONDS, SHALL ONLY BE IMPLEMENTED UPON COMPLETION OF A TIE-IN FACILITY. THIS FACILITY IS PLANNED FOR DORSEY RUN AND SHALL CONSIDER THE ULTIMATE DEVELOPMENT OF THIS PARCEL.
1. DIVERT D.A. # 1 TO POND # 2 (CLEAN WATER)
 2. POND # 1 TO BE FILLED/P.S.D.'S TO BE CONSTRUCTED AT EDGE OF PROPOSED SLOPE AS SHOWN. BERMS TO BE MAINTAINED.
 3. REMOVE DIVERSION TO POND # 2.
 4. DIVERT RIP RAP CHANNEL FROM UPPER PORTION OF D.A. # 3 TO BY-PASS POND # 3 (SEE INSERT FOR BY-PASS/WEIR DIVERSION GRADING).
 5. FILL POND # 3.
 6. CONSTRUCT STORM DRAIN SYSTEM, INCLUDING DIVERSION BERMS TO 1-2 AND 1-3.
 7. DIVERT D.A. # 3 TO STORM DRAIN SYSTEM.
 8. FILL REMAINDER OF POND # 3 AND RIP-RAP CHANNEL DIVERSION.
 9. DIVERT D.A. # 2 TO 1-1 (CLEAN WATER).
 10. POND # 2 AND BE FILLED/P.S.D.'S TO BE CONSTRUCTED AT EDGE OF PROPOSED SLOPE AS SHOWN. BERMS TO BE MAINTAINED.
 11. ALL DISTURBED AREAS TO BE STABILIZED.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

James M. Hahn 2/6/91 DATE
HOWARD S.E.D.

Robert W. Zickm 2/6/91 DATE
HOWARD S.E.D.



KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

COLUMBIA GATEWAY
A PORTION OF PARCEL "T"
SEDIMENT CONTROL
SEQUENCING PLAN

WITH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10,75 LITTLE PATHFINDER PARKWAY
COLUMBIA, MARYLAND 21044

PROVISION NAME: [] SECT./AREA: [] LOT/PART: []
PIA: [] OF [] BLOCK: [] ZONE: [] TAX/ZONE MAP: [] ELEC. DIST./CENSUS TR.: []
WATER CODE: [] SEWER CODE: []

APPROVED HOWARD CO. DEPT. OF PUBLIC WORKS
FOR PUBLIC WATER & SEWERAGE SYSTEM
James M. Hahn 10/91 DATE
CO. HEALTH OFFICER

APPROVED FOR PUBLIC WATER, SEWER, STORM DRAIN AND
PUBLIC UTILITIES, HOWARD CO. DEPT. OF PUBLIC WORKS.
James M. Hahn 12/29/91 DATE
DIRECTOR

Chris A. Ryan 4-4-91 DATE
CHIEF, BUREAU OF ENGINEERING, MK

APPROVED FOR THE DEPT. OF PLANNING &
COMMUNITY DEVELOPMENT
James M. Hahn 11/27/92 DATE
CHIEF, DIVISION OF COMM. PLANNING &
LAND DEVELOPMENT

MATCHLINE SEE SHEET 13 OF 17

PARCEL "S"

COLUMBIA

GATEWAY

DRIVE

PARCEL "T"

PARCEL "T"

OWNERS/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THE 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. ALSO, THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LISTED IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

Colin J. Fidd
DEVELOPER
DATE: 5-10-90

ALBERT J. JONES
PRINT NAME, TITLE, FIRM & ADDRESS

CONSULTANT'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

NAME: *Ed Lubarger* MD. LICENSE NO. *18568*
DATE: 5/11/90

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

SIGNATURE: *James M. Nelson* DATE: 2/6/91
U.S. SOIL CONSERVATION SERVICE

SIGNATURE: *Robert W. Zuhra* DATE: 2/6/91
HOWARD S.C.D.

APPROVED FOR PUBLIC WATER & SEWERAGE SYSTEM
HOWARD CO HEALTH DEPT
DATE: 1-6-92

APPROVED FOR PUBLIC WATER, SEWER, STORM DRAIN
& ROADS, HOWARD CO. DEPT. OF PUBLIC WORKS
DATE: 2/23/91

APPROVED, BUREAU OF ENGINEERING MK
DATE: 4-4-93

APPROVED, HOWARD COUNTY DEPT OF PLANNING AND ZONING
DATE: 1/24/92

APPROVED, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE: 1/22/92

Ed Lubarger

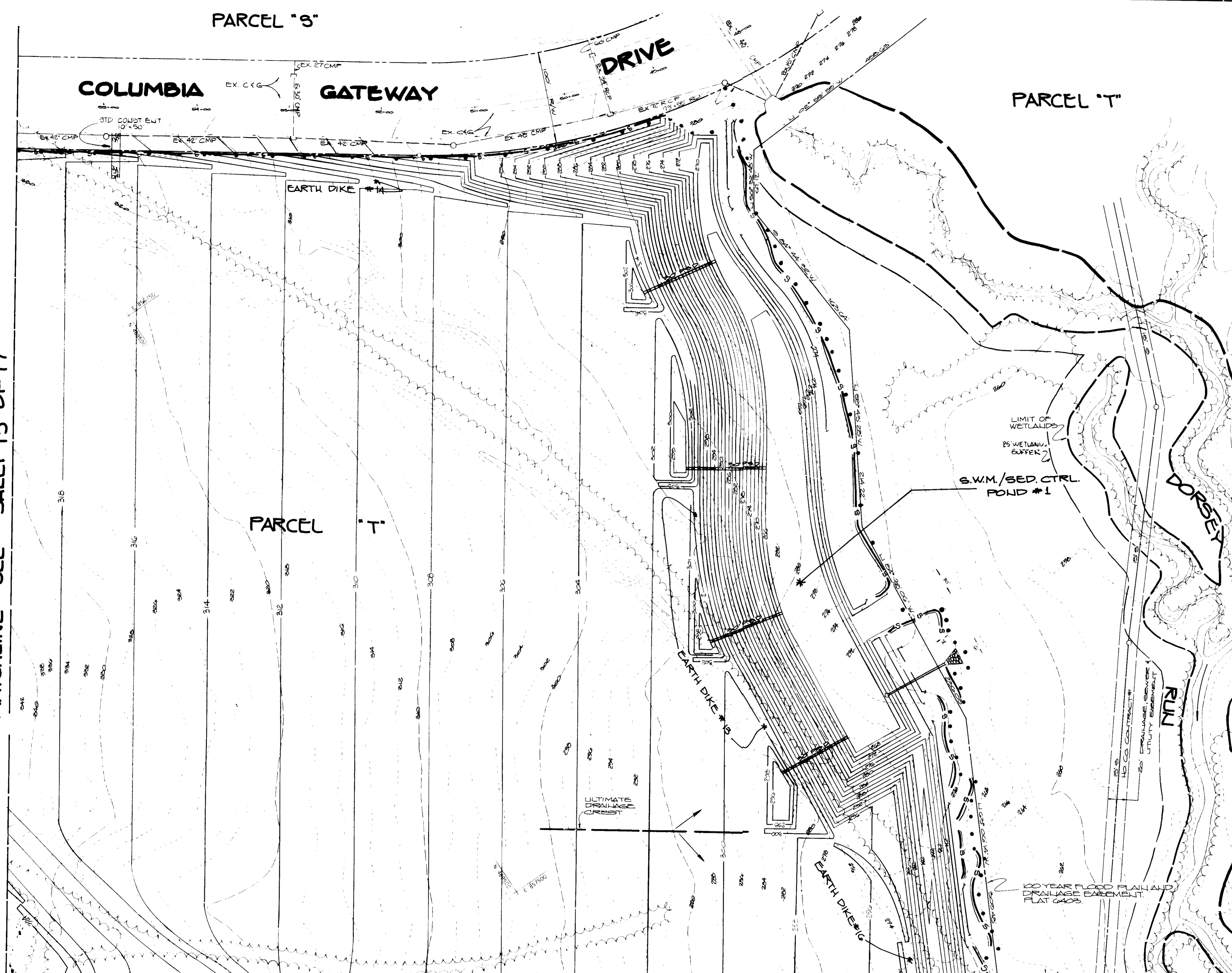
KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED J.J.D.	COLUMBIA GATEWAY A PORTION OF PARCEL "T" MASS GRADING SEDIMENT CONTROL PLAN	SCALE 1"=50'
DRAWN MDD		DRAWING 11
CHECKED D.N.M.		JOB NO. 0-189-95
DATE 4-25-90		FEE NO.
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		

OWNER DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

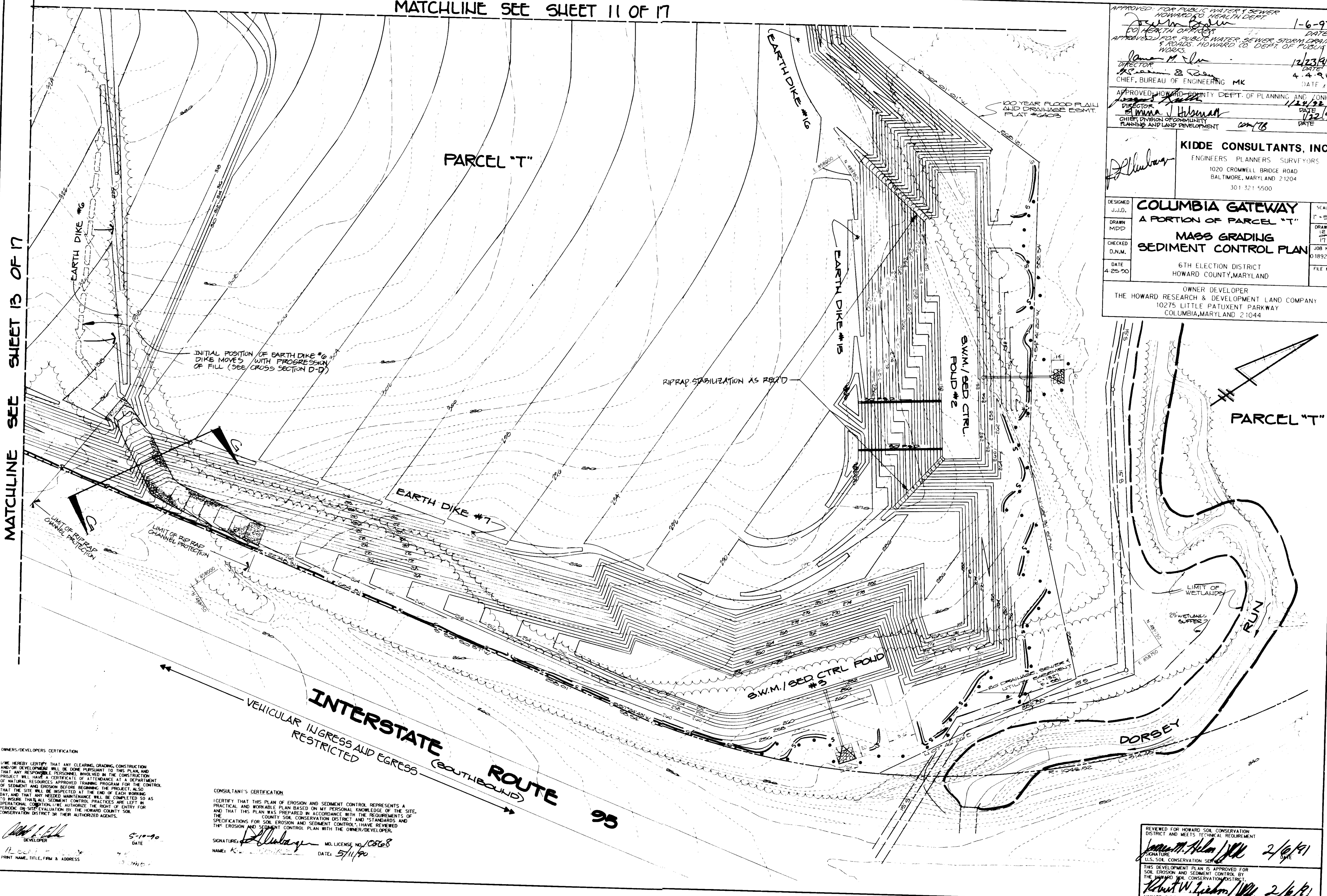
SDP 90 205

MATCHLINE SEE SHEET 12 OF 17



MATCHLINE SEE SHEET 11 OF 17

MATCHLINE SEE SHEET 13 OF 17



APPROVED FOR PUBLIC WATER & SEWER
 HOWARD CO. HEALTH DEPT. 1-6-92
 DATE
 APPROVED FOR PUBLIC WATER, SEWER, STORM DRAIN
 & ROADS, HOWARD CO. DEPT. OF PUBLIC
 WORKS. 12/23/91
 DATE
 DIRECTOR 8/2/91
 CHIEF, BUREAU OF ENGINEERING MK 4.4.91
 DATE
 APPROVED HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 1/22/92
 DATE
 DIRECTOR
 CHIEF, DIVISION OF COMMUNITY
 PLANNING AND LAND DEVELOPMENT 1/22/92
 DATE

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301 321 5500

DESIGNED J.J.D. SCALE 1"=50'
 DRAWN MDD DRAWING 12/17
 CHECKED D.N.M. JOB NO. 0189295
 DATE 4-25-90 FILE NO.

COLUMBIA GATEWAY
A PORTION OF PARCEL "T"
MASS GRADING
SEDIMENT CONTROL PLAN

6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

OWNERS/DEVELOPERS CERTIFICATION
 I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT 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, ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

DATE 5-10-90
 DEVELOPER
 PRINT NAME, TITLE, FIRM & ADDRESS

CONSULTANT'S CERTIFICATION
 I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

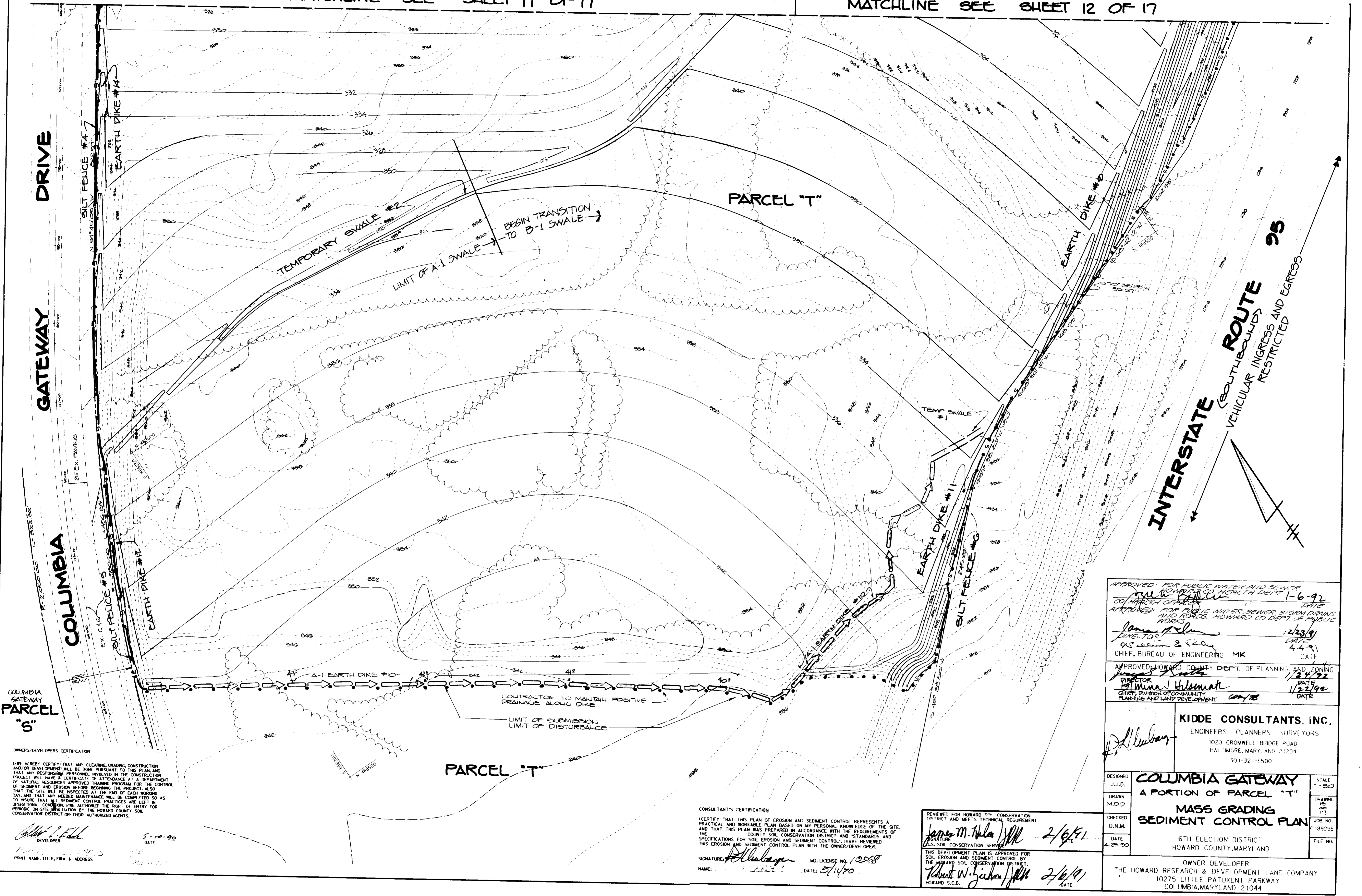
SIGNATURE: [Signature]
 NAME: K. [Name]
 MD. LICENSE NO. 10568
 DATE: 5/11/90

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
 SIGNATURE: [Signature]
 U.S. SOIL CONSERVATION SERVICE
 DATE: 2/16/91

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE: [Signature]
 HOWARD S.C.D.
 DATE: 2/16/91

MATCHLINE SEE SHEET 11 OF 17

MATCHLINE SEE SHEET 12 OF 17



OWNERS/DEVELOPERS CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT 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. ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

John P. Hall
DEVELOPER
5-10-90
DATE

PRINT NAME, TITLE, FIRM & ADDRESS

CONSULTANT'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: *J. H. Huber* MD. LICENSE NO. 12568
NAME: J. H. Huber DATE: 5/14/90

REVIEWED FOR HOWARD COUNTY CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

James M. Nelson 2/6/91
DATE

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

Robert W. Johnson 2/6/91
DATE

APPROVED FOR PUBLIC WATER AND SEWER HOWARD COUNTY HEALTH DEPT 1-6-92
DATE

APPROVED FOR PUBLIC WATER, SEWER STORM DRAINS AND ROADS, HOWARD COUNTY DEPT. OF PUBLIC WORKS

James M. Nelson 12/23/91
DIRECTOR DATE

James M. Nelson 4-4-91
DATE

CHIEF, BUREAU OF ENGINEERING MK

APPROVED HOWARD COUNTY DEPT OF PLANNING AND ZONING

James M. Nelson 1/24/92
DIRECTOR DATE

James M. Nelson 1/22/92
DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

DESIGNED: J.J.D.
DRAWN: M.D.D.
CHECKED: D.N.M.
DATE: 4-25-90

COLUMBIA GATEWAY
A PORTION OF PARCEL "T"
MASS GRADING
SEDIMENT CONTROL PLAN

6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

SCALE: 1" = 50'
DRAWING NO.: 17
JOB NO.: 0189295
FILE NO.:

COLUMBIA GATEWAY
PARCEL "S"

DRIVE

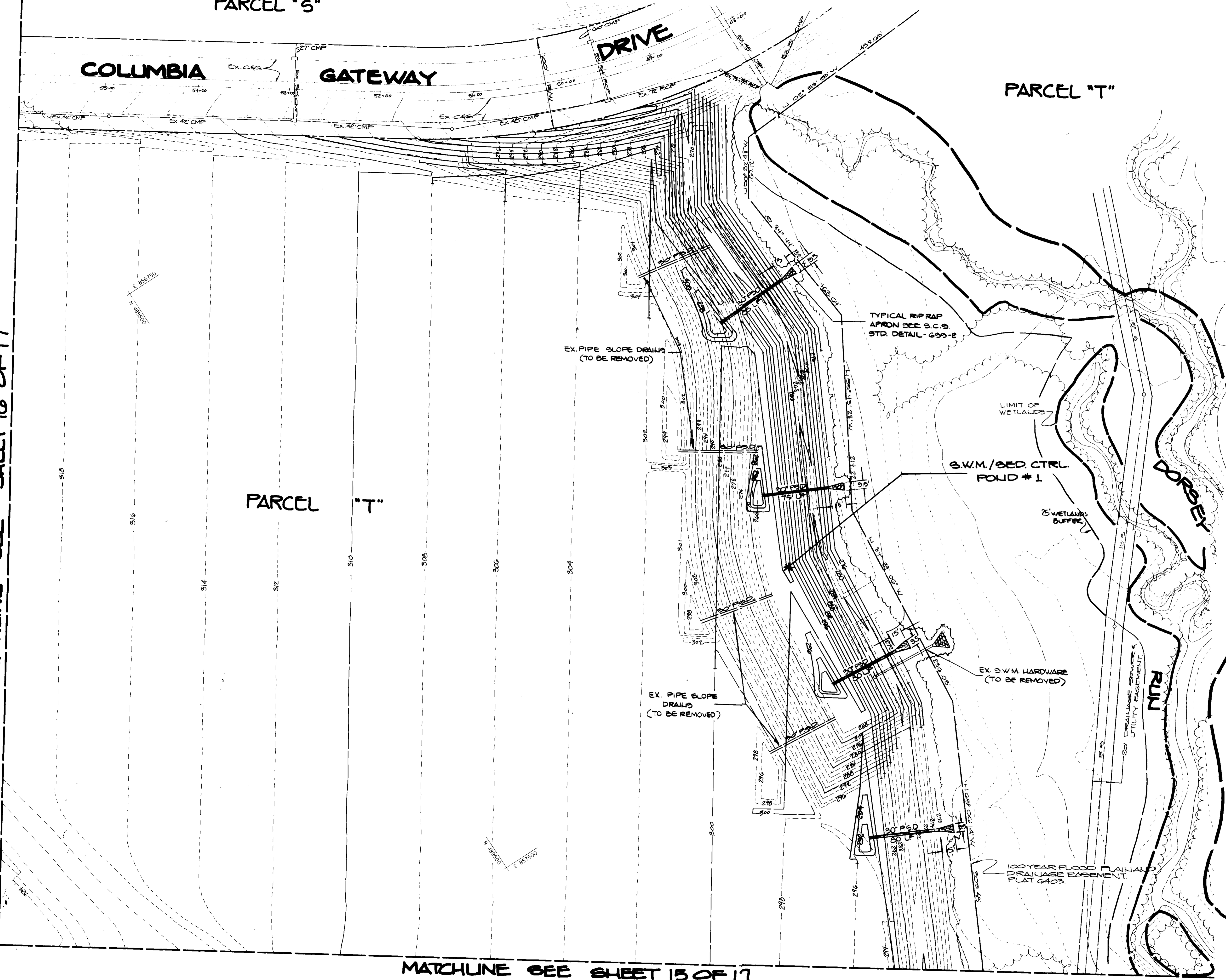
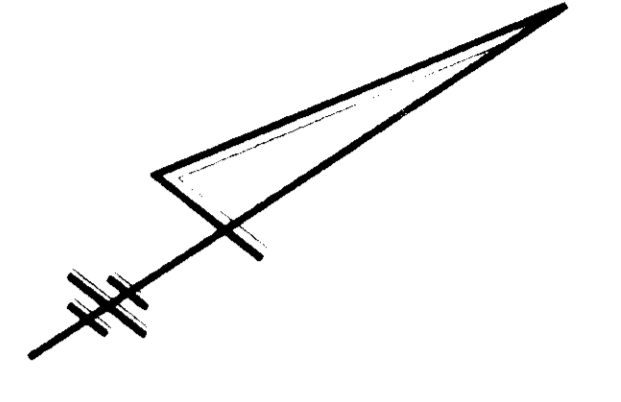
COLUMBIA GATEWAY

PARCEL "T"

PARCEL "T"

MATCHLINE SEE SHEET 16 OF 17

MATCHLINE SEE SHEET 15 OF 17



OWNERS/DEVELOPERS CERTIFICATION
I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THE PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BECOMING THE PROJECT. I/WE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERSONNEL ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

DEVELOPER
Robert F. Edwards
PRINT NAME, TITLE, FIRM & ADDRESS
5-10-90
DATE
HRD
COLUMBIA

CONSULTANT'S CERTIFICATION
I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY SOIL CONSERVATION DISTRICT AND "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.
SIGNATURE: *J. J. Kidde* MD. LICENSE NO. 0568
NAME: J. J. KIDDE DATE: 5/14/90

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
SIGNATURE: *James M. Helm* DATE: 2/6/91
U.S. SOIL CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
SIGNATURE: *Walter W. Zickler* DATE: 2/6/91
HOWARD S.C.D.

APPR. FOR PUBLIC WATER AND SEWER
HOWARD CO. HEALTH DEPT.
SIGNATURE: *Howard W. ...* DATE: 1-6-92
COUNTY HEALTH OFFICER
APPR. FOR PUBLIC WATER, SEWER, STORM DRAINS AND ROADS. NO CO. DEPT. OF PUBLIC WORKS
SIGNATURE: *James ...* DATE: 12/25/91
DIRECTOR
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
SIGNATURE: *James ...* DATE: 1/23/92
DIRECTOR
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
DATE: 1/23/92

KIDDE CONSULTANTS, INC.
ENGINEERS PLANNERS SURVEYORS
1020 CROMWELL BRIDGE ROAD
BALTIMORE, MARYLAND 21204
301-321-5500

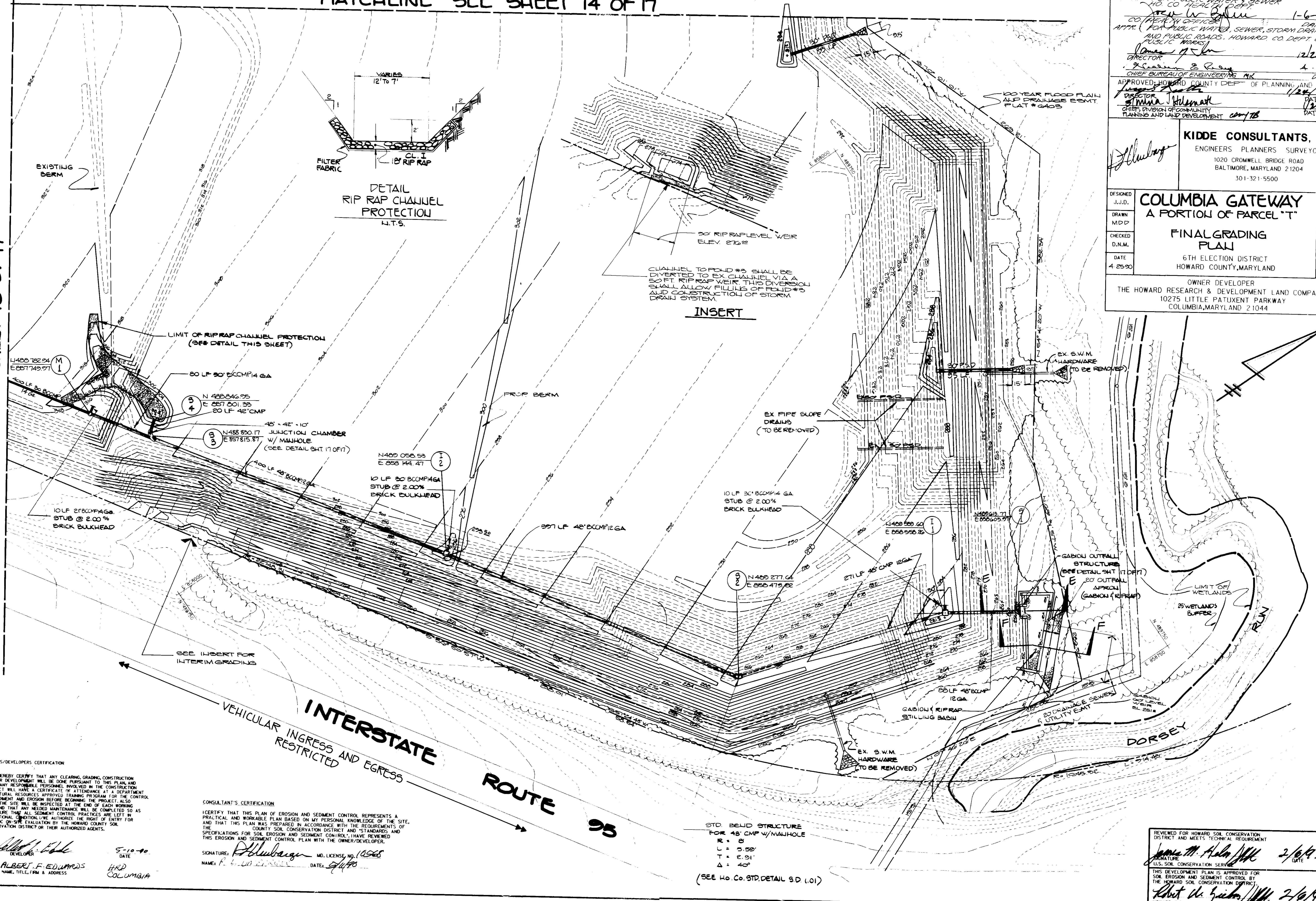
DESIGNED: J.J.D.
DRAWN: MDD
CHECKED: D.N.M.
DATE: 4-25-90
SCALE: 1" = 50'
DRAWING: 17
JOB NO.: 0189295
FILE NO.:

OWNER DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

SDP 90 205

MATCHLINE SEE SHEET 14 OF 17

MATCHLINE SEE SHEET 16 OF 17



APPR. FOR PUBLIC WATER & SEWER
 HO. CO. DEPT. 1-6-92
 DATE
 CO. APPROVED FOR PUBLIC WATER, SEWER, STORM DRAINAGE
 AND PUBLIC ROADS. HOWARD CO. DEPT. OF
 PUBLIC WORKS
 Director 12/23/91
 DATE
 Chief Bureau of Engineering 12/23/91
 DATE
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 Director 12/23/91
 DATE
 Chief Division of Community Planning and Land Development 12/23/91
 DATE

KIDDE CONSULTANTS, INC.
 ENGINEERS PLANNERS SURVEYORS
 1020 CROMWELL BRIDGE ROAD
 BALTIMORE, MARYLAND 21204
 301-321-5500

OWNER DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT LAND COMPANY
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

DESIGNED J.J.D.
 DRAWN M.D.D.
 CHECKED D.N.M.
 DATE 4-25-90

COLUMBIA GATEWAY
 A PORTION OF PARCEL "T"
FINAL GRADING PLAN
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE 1" = 50'
 DRAWING NO. 17
 JOB NO. 0189295
 FILE NO.

OWNERS/DEVELOPERS CERTIFICATION
 I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT 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. ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

Signature: Albert F. Edwards
 DATE: 5-10-90
 DEVELOPER
 PRINT NAME, TITLE, FIRM & ADDRESS
 ALBERT F. EDWARDS
 HRD
 COLUMBIA

CONSULTANT'S CERTIFICATION
 I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

Signature: R. Schuberger
 MD. LICENSE NO. 10568
 NAME: R. SCHUBERGER
 DATE: 5/11/90

STD. BEND STRUCTURE
 FOR 48" CMP W/ MANHOLE
 R = 8'
 L = 3.50'
 T = 2.91'
 Δ = 40°
 (SEE HO. CO. STD. DETAIL 9.D (1.01))

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
 Signature: James M. Hahn
 DATE: 2/6/91
 U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: Albert D. Zwick
 DATE: 2/6/91
 HOWARD S.C.D.

MATCHLINE SEE SHEET 14 OF 17

MATCHLINE SEE SHEET 15 OF 17

DRIVE

GATEWAY

COLUMBIA

INTERSTATE ROUTE 95
VEHICULAR INGRESS AND EGRESS RESTRICTED

OWNERS/DEVELOPERS CERTIFICATION
I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT, ALSO THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO INSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION, I/WE AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS.

ALBERT F. EDWARDS
DEVELOPER
5-10-90
DATE
123
COLUMBIA
ADDRESS

STRUCTURE SCHEDULE						
NO	TYPE	TOP ELEV.	ILIV. OUT	ILIV. IN	LOCATION	REMARKS
I-1	MODIFIED D INLET	222.9	226.9	210.9	SEE PLAN	SEE DETAIL
I-2	"	226.2	228.2	214.2	"	"
I-3	"	226.2	210.2	210.2	"	"
S-1	48" STD METAL END SECTION		249.2			SD-5G1
S-2	48" STD METAL STRUCTURE	228.2	220.2	220.2		SD 1.01 W/MANHOLE
S-3	48" STD METAL STRUCTURE	207.2	237.2	220.2		SD 1.01 W/MANHOLE
S-4	48" STD METAL END SECTION		230.2			SD 5G1
M-1	STR M4	216.2	206.2	206.2	SEE PLAN	G. 5.02

CONSULTANT'S CERTIFICATION
I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: *[Signature]* MD. LICENSE NO. 105768
NAME: K. J. MORGAN DATE: 2/4/90

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
SIGNATURE: *[Signature]* DATE: 2/6/91
SIGNATURE: *[Signature]* DATE: 2/13/91
HOWARD S.C.D.

APPROVED FOR PUBLIC WATER AND SEWER HOWARD CO. HEALTH DEPT. 1-6-92
APPROVED FOR PUBLIC WATER, SEWER, STORM DRAIN AND PUBLIC ROADS. HOWARD CO. DEPT. OF PUBLIC WORKS
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
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ENGINEERS PLANNERS SURVEYORS
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DESIGNED: J.J.D.
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DRAWING: 17
JOB NO.: 0189295
FILE NO.: [Blank]

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A PORTION OF PARCEL "T"
FINAL GRADING PLAN
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HOWARD COUNTY, MARYLAND
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COLUMBIA, MARYLAND 21044

SOP 90 205

