

ROAD CONSTRUCTION, STORM DRAINAGE AND GRADING PLANS FOR WEST FRIENDSHIP ESTATES

SECTION 1 LOTS 1 - 49 PARCEL 'A' & 'B' THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

APPROVED
DEPARTMENT OF PUBLIC WORKS
Mark ... 4/27/94
CHIEF, LAND DEVELOPMENT DIVISION
APPROVED
DEPARTMENT OF PUBLIC WORKS
Andrew ... 4-25-94
CHIEF, BUREAU OF HIGHWAYS
APPROVED
DEPARTMENT OF PUBLIC WORKS
James ... 4/27/04
CHIEF, BUREAU OF ENGINEERING
APPROVED
DEPARTMENT OF PLANNING & ZONING
Gina ... 5/2/94
CHIEF, BUREAU OF LAND DEVELOPMENT AND RESEARCH

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION AT (410) 321-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- PROJECT BACKGROUND:
LOCATION: MD. RTE. 32 TAX MAP: 15A22
PARCEL: 32, 42 & 533
ZONING: RC
ELECTION DISTRICT: 3RD.
SECTION: ONE
TOTAL TRACT AREA: 427 AC.± (SECTION ONE & TWO)
SECTION AREA: 325.63 AC.± (SECTION ONE)
NUMBER OF PROPOSED LOTS: 49 (SECTION ONE)
DATE OF PRELIMINARY PLAN # 93-12 APPROVAL: 7/28/93
DATE OF SKETCH PLAN (S 93-03) APPROVAL: 12/21/92
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- TOPOGRAPHIC SURVEY BY PHOTO SCIENCE, INC. ON OR ABOUT 3/28/90. TWO (2) FOOT CONTOUR INTERVAL.
- HORIZONTAL AND VERTICAL DATUM BASED ON HOWARD COUNTY CONTROL.
- PRIVATE WATER AND PRIVATE SEWER TO BE UTILIZED.
- STORM WATER MANAGEMENT IS PROVIDED FOR THE INCREASE IN RUN-OFF RESULTING FROM THE ROAD IMPERVIOUS AREAS. ALL STORM WATER MANAGEMENT PONDS ARE PUBLIC STORM WATER MANAGEMENT POND NO. 1 IS A DETENTION FACILITY AND STORM WATER MANAGEMENT POND NO. 2 IS A RETENTION FACILITY.
- FLOODPLAIN STUDY PREPARED BY FISHER, COLLINS & CARTER, INC. AND APPROVED UNDER P 93-12 ON 7/28/93.
- WETLANDS DELINEATION STUDY PREPARED BY EXPLORATION RESEARCH, INC. AND APPROVED UNDER P 93-12 ON 7/28/93.
- TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, INC. ON SEPTEMBER 30, 1992 AND APPROVED UNDER P 93-12 ON 7/28/93.
- NOISE STUDY PREPARED BY THE WILSON T. BALLARD COMPANY IN JANUARY 1993 AND APPROVED UNDER P 93-12 ON 7/28/93.
- GEOTECHNICAL REPORT PREPARED BY G.T.A. INC. ON DECEMBER 21, 1992 AND APPROVED UNDER P 93-12 ON 7/28/93.
- EXISTING UTILITIES WERE LOCATED BY A SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. ON 7/2/93.
- AREA OF PROPOSED LOTS: 55,444 AC.±
- AREA OF PROPOSED ROADS: 5,622 AC.±
- THE CREATION OF 49 RESIDENTIAL LOTS WITHIN SECTION ONE REQUIRES AN ACCOMPANYING PRESERVATION PARCEL OF 209.25 ACRES. PART OF THE ADDITIONAL 117.37 ACRES OF PRESERVATION PARCEL PROVIDED IN THIS SECTION (SEE COMPUTATIONS BELOW) WILL BE USED TO ACHIEVE THE PRESERVATION PARCEL REQUIREMENTS WITHIN SECTION TWO.
PRESERVATION PARCEL COMPUTATIONS:
a) TOTAL ACRES NEEDED TO SUPPORT 49 LOTS: 49x4.25 = 209.25 AC.±
b) TOTAL PRESERVATION PARCEL PROVIDED IN SECTION ONE: 264.96 AC.±
c) REQUIRED PRESERVATION PARCEL FOR SECTION ONE=209.25-60.67 (THE AREA OF LOTS & ROADS) = 147.19 AC.±
d) ADDITIONAL PRESERVATION PARCEL AVAILABLE FOR SECTION TWO = 264.96-117.37 AC.±
- SECTION 16.116 (a) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PROHIBITS CLEARING, GRADING OR CONSTRUCTION ACTIVITY WITHIN THE REQUIRED WETLAND OR STREAM BANK BUFFERS.
- HEALTH DEPARTMENT NOTES:
a) THE WELLS AND EXISTING SEPTIC SYSTEMS FOR LOTS NOS. 37, 38 AND 39 SHALL BE ABANDONED AND WELLS SEALED AT THE EXISTING STRUCTURES ARE TO BE REMOVED.
b) GROUND WATER APPROPRIATION PERMIT SHALL BE OBTAINED PRIOR TO SIGNATURE ON FINAL PLATS.
c) REPRESENTATIVE TEST WELLS* AS DIRECTED BY THE HEALTH DEPARTMENT, TO BE DRILLED PRIOR TO SIGNATURE OF FINAL PLAT. (LOTS 23, 32, 33, 39 AND 49).
- ALL LANDSCAPING REQUIRED, STREET TREES AND PERIMETER LANDSCAPE EDGES, ARE PROVIDED WITH THIS SUBMITTAL. SEE GENERAL SHEET FOR REQUIREMENTS.
- EXISTING TREE REMOVAL WITHIN THE BOUNDARY OF THE BUILDABLE LOTS SHALL NOT EXCEED 40,000 SQ.FT.

BENCH MARKS

- B.M. #1 ELEV. 544.36
HOWARD COUNTY CONCRETE MONUMENT No. 3335001.
SEE SHEET 2 FOR PLAN VIEW
N 528.079
E 807.971
- B.M. #364 ELEV. 540.647
P.K. NAIL SET. SEE SHEET 2 FOR PLAN VIEW LOCATION
N 527.8461089
E 807.5213350

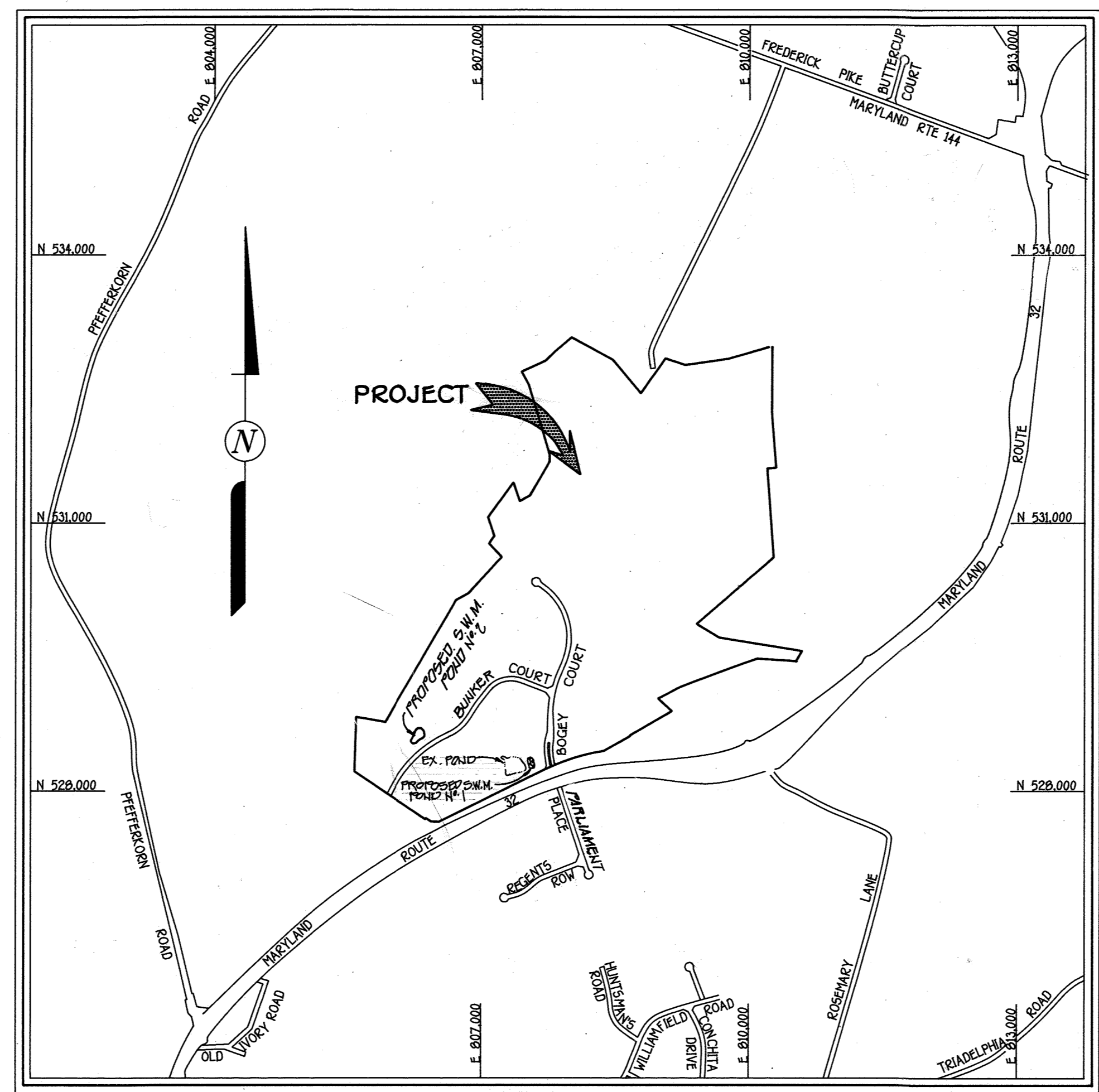
SHEET INDEX

- TITLE SHEET
- MARYLAND ROUTE 32 PLAN AND PROFILE
- BOGEY COURT PLAN AND PROFILE
- BOGEY COURT PLAN AND BUNKER COURT PLAN AND PROFILE
- BOGEY COURT PLAN AND PROFILE
- BUNKER COURT PLAN AND PROFILE
- STREET TREE, GRADING, SEDIMENT CONTROL AND PERIMETER LANDSCAPE PLAN
- STREET TREE, GRADING, SEDIMENT CONTROL AND PERIMETER LANDSCAPE PLAN
- STREET TREE, GRADING, SEDIMENT CONTROL AND PERIMETER LANDSCAPE PLAN
- STREET TREE, GRADING, SEDIMENT CONTROL AND PERIMETER LANDSCAPE PLAN
- ROAD AND SEDIMENT CONTROL DETAILS
- DRAINAGE AREA MAP
- STORM DRAIN PROFILES
- STORM DRAIN AND STORM WATER MANAGEMENT POND PROFILES
- STORM WATER MANAGEMENT POND NO. 2 PROFILES, DETAILS AND NOTES
- GRADING AND SEDIMENT CONTROL PLAN
17. FOREST CONSERVATION PLAN.
18. FOREST CONSERVATION PLAN (BERM No. 3&4)
19. FOREST CONSERVATION PLAN NOTES AND DETAILS (BERM No. 3&4)
20. ULTIMATE GRADING PLAN (BERM No. 3&4)

OPERATION AND MAINTENANCE SCHEDULE OF HOMEOWNERS ASSOCIATION OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITIES POND No. 1, POND No. 2 AND WATER QUALITY POND.

HOME OWNERS ASSOCIATION'S MAINTENANCE RESPONSIBILITIES:

- TOP AND SIDE SLOPES OF EMBANKMENT SHALL BE MAINTAINED A MINIMUM OF TWICE A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MAINTAINED AS NEEDED.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MAINTENANCE OPERATIONS AND AS NEEDED.
- WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, SEDIMENT SHOULD BE REMOVED FROM THE POND. APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS IS REQUIRED.



VICINITY MAP
SCALE: 1" = 1200'

SHEET INDEX

No.	Date	Description
11/18/01		ADDED SHEETS #18, #19, #20 - NEW BERMS
12/18/01		ADDED SHEET #17 - FOREST CONSERVATION PLAN
		REVISION BLOCK

RESPONSIBILITY: ADDED REDLINE NO. 2 CROSS REFERENCE NOTES TO REFER TO NEW SHEETS THAT WERE DEVELOPED CONCEPTUALLY, NOT FOR CONSTRUCTION.



Name: Mitchell Scott
Expiration: 04/25/2022
Address: RK&K, 700 East Pratt St., Suite 500, Baltimore, MD 21202
Phone: (410) 462-9215
mscott@rkk.com



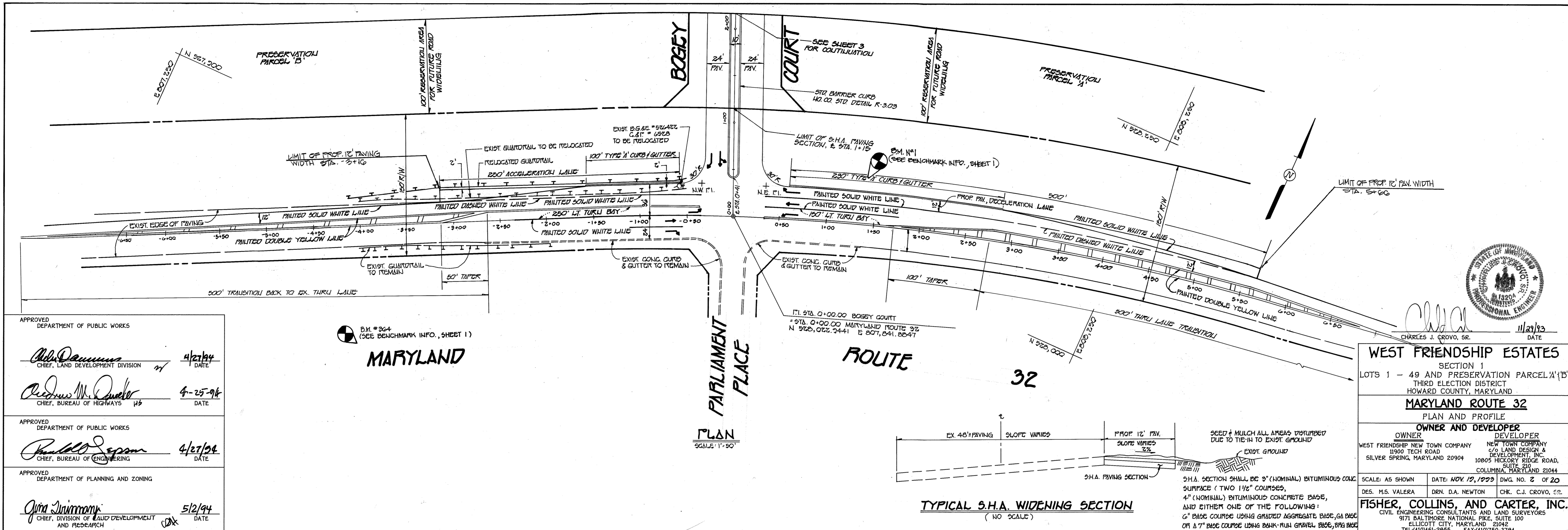
CHARLES J. CROVO SR. 11/21/93
DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
971 BALTIMORE NATIONAL PIKE, SUITE 100
ELLICOTT CITY, MARYLAND 21042
(410) 461-2955

OWNER: WEST FRIENDSHIP TOWN COMPANY
11900 TECH ROAD
SILVER SPRING, MARYLAND 20904

DEVELOPER: NEW TOWN COMPANY
c/o LAND DESIGN & DEVELOPMENT, INC.
10805 HICKORY RIDGE ROAD, SUITE 210
COLUMBIA, MARYLAND 21044

SHEET 1 OF 20



APPROVED
DEPARTMENT OF PUBLIC WORKS

Mr. Dammus
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 4/27/94

Richard M. Quaker
CHIEF, BUREAU OF HIGHWAYS
DATE: 4-25-94

APPROVED
DEPARTMENT OF PUBLIC WORKS

Richard J. Sporn
CHIEF, BUREAU OF ENGINEERING
DATE: 4/27/94

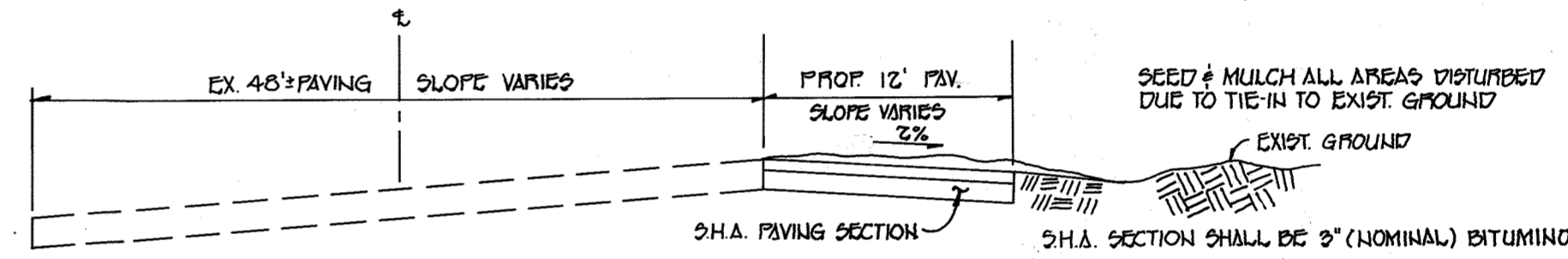
APPROVED
DEPARTMENT OF PLANNING AND ZONING

Jane Swinburn
CHIEF, DIVISION OF LAND DEVELOPMENT
AND RESEARCH
DATE: 5/27/94

B.M. #364
(SEE BENCHMARK INFO., SHEET 1)

MARYLAND

PLAN
SCALE: 1"=50'



WEST FRIENDSHIP ESTATES
SECTION 1
LOTS 1 - 49 AND PRESERVATION PARCEL 'A' (B)
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

MARYLAND ROUTE 32
PLAN AND PROFILE

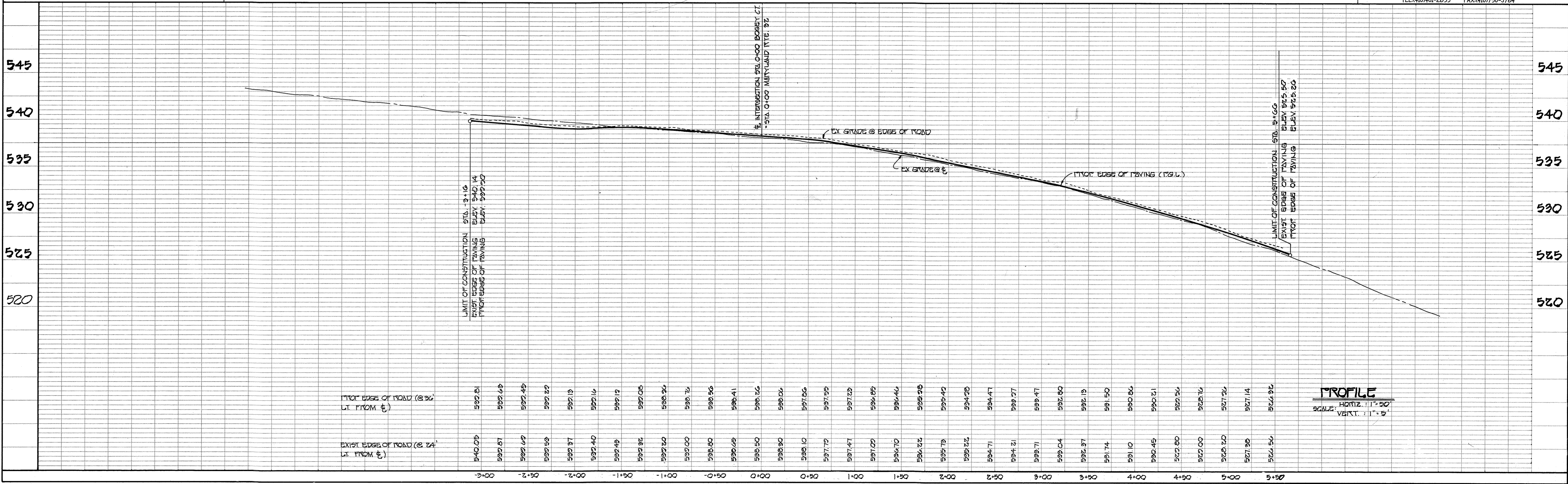
OWNER AND DEVELOPER

OWNER: WEST FRIENDSHIP NEW TOWN COMPANY
1900 TECH ROAD
SILVER SPRING, MARYLAND 20904

DEVELOPER: NEW TOWN COMPANY
C/O LAND DESIGN & DEVELOPMENT, INC.
10805 HICKORY RIDGE ROAD, SUITE 210
COLUMBIA, MARYLAND 21044

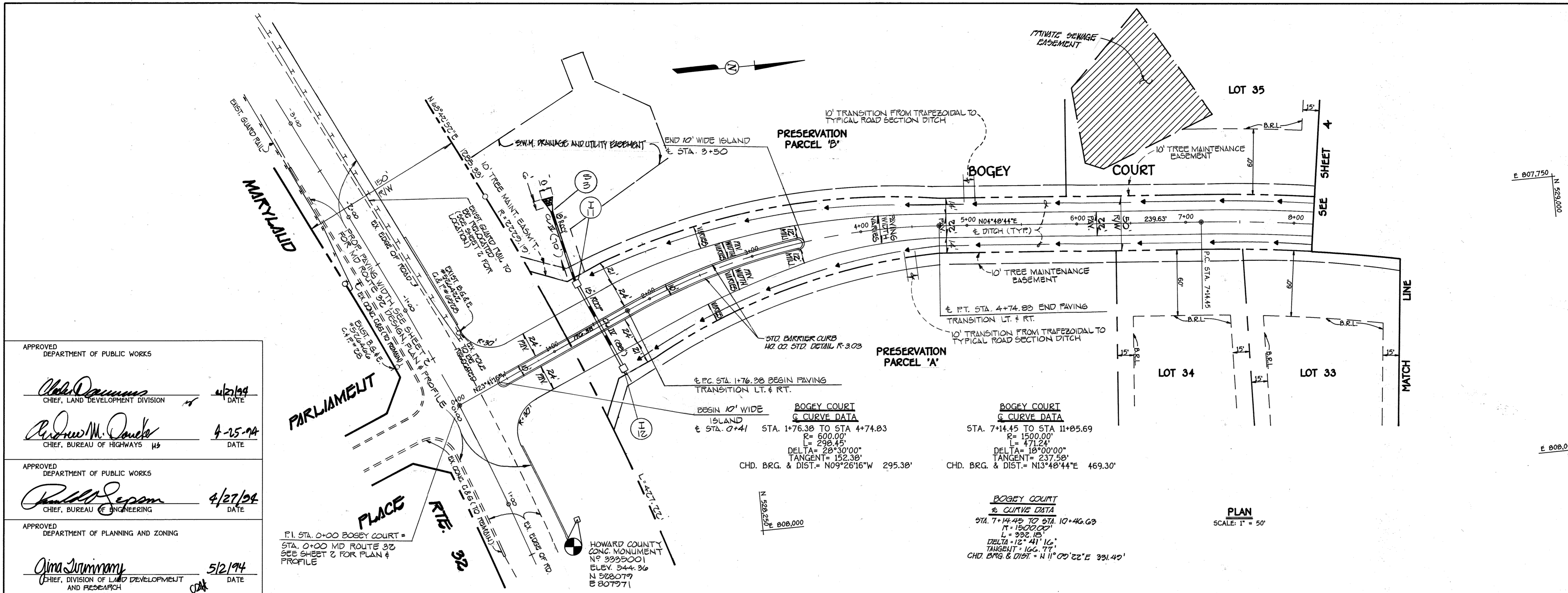
SCALE: AS SHOWN DATE: NOV. 12, 1993 DWG. NO. 2 OF 20
DES. M.S. VALERA DRN. D.A. NEWTON CHK. C.J. GROVO, ES.

FISHER, COLLINS, AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
9171 BALTIMORE NATIONAL PIKE, SUITE 100
ELLICOTT CITY, MARYLAND 21042
TEL: (410) 461-2855 FAX: (410) 750-3784



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

406



APPROVED
 DEPARTMENT OF PUBLIC WORKS

Charles J. Crovo, Sr.
 CHIEF, LAND DEVELOPMENT DIVISION
 DATE: 4/27/94

Richard M. Danks
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 4-25-94

APPROVED
 DEPARTMENT OF PUBLIC WORKS

Richard J. Seaman
 CHIEF, BUREAU OF ENGINEERING
 DATE: 4/27/94

APPROVED
 DEPARTMENT OF PLANNING AND ZONING

Anna Summery
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 DATE: 5/2/94

STATE OF MARYLAND
 CHARLES J. CROVO, SR.
 REGISTERED PROFESSIONAL ENGINEER
 No. 13204
 DATE: 11/29/93

WEST FRIENDSHIP ESTATES
 SECTION 1
 LOTS 1 - 49 AND PRESERVATION PARCEL A, B
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

BOGEY COURT
 PLAN AND PROFILE

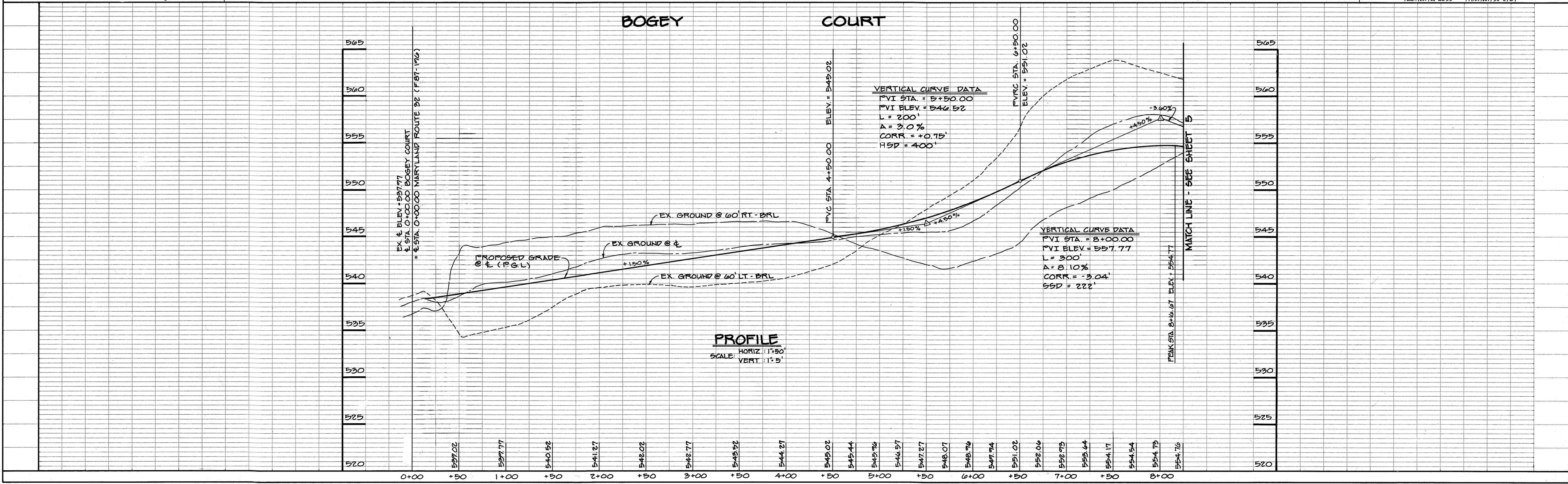
OWNER AND DEVELOPER

OWNER
 WEST FRIENDSHIP NEW TOWN COMPANY
 11900 TECH ROAD
 SILVER SPRING, MARYLAND 20904

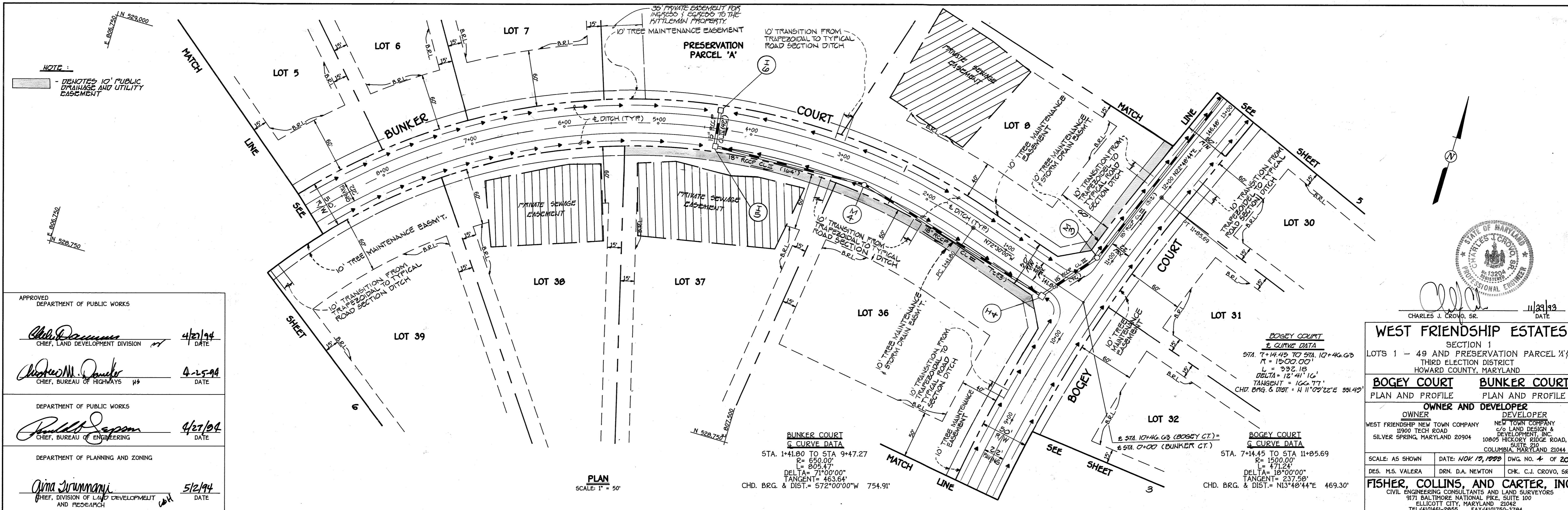
DEVELOPER
 NEW TOWN COMPANY
 570 LAND DESIGN & DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE 210
 COLUMBIA, MARYLAND 21044

SCALE: AS SHOWN DATE: NOV 17, 1993 DWG. NO. 3 OF 20
 DES. M.S. VALERA DRN. D.A. NEWTON CHK. C.J. CROVO, SR.

FISHER COLLINS AND CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
 9171 BALTIMORE NATIONAL PIKE, SUITE 100
 ELLICOTT CITY, MARYLAND 21042
 TEL: (410) 461-2855 FAX: (410) 750-3784



406



APPROVED
DEPARTMENT OF PUBLIC WORKS

Charles J. Crovo, Sr.
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 4/27/94

Richard M. Dwyer
CHIEF, BUREAU OF HIGHWAYS
DATE: 4-25-94

DEPARTMENT OF PUBLIC WORKS

Paul D. Sapon
CHIEF, BUREAU OF ENGINEERING
DATE: 4/27/94

DEPARTMENT OF PLANNING AND ZONING

Anita Srivannani
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
DATE: 5/2/94

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
13204
DATE: 11/29/93
CHARLES J. CROVO, SR.

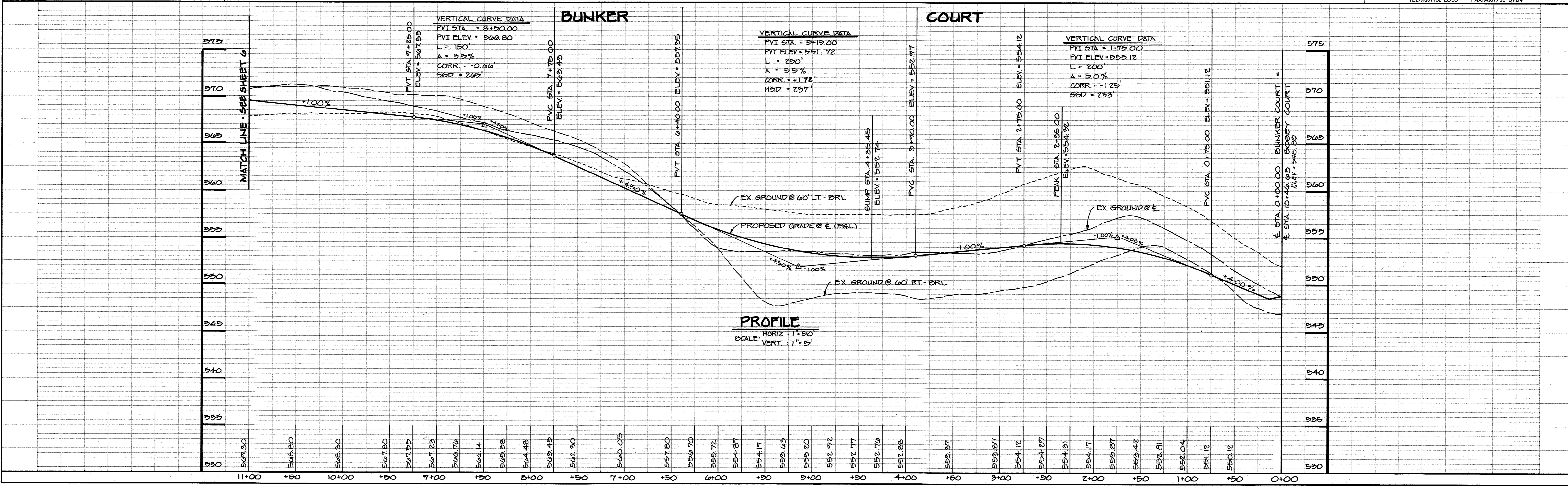
WEST FRIENDSHIP ESTATES
SECTION 1
LOTS 1 - 49 AND PRESERVATION PARCEL 'A', 'B'
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

BOGEY COURT PLAN AND PROFILE
BUNKER COURT PLAN AND PROFILE

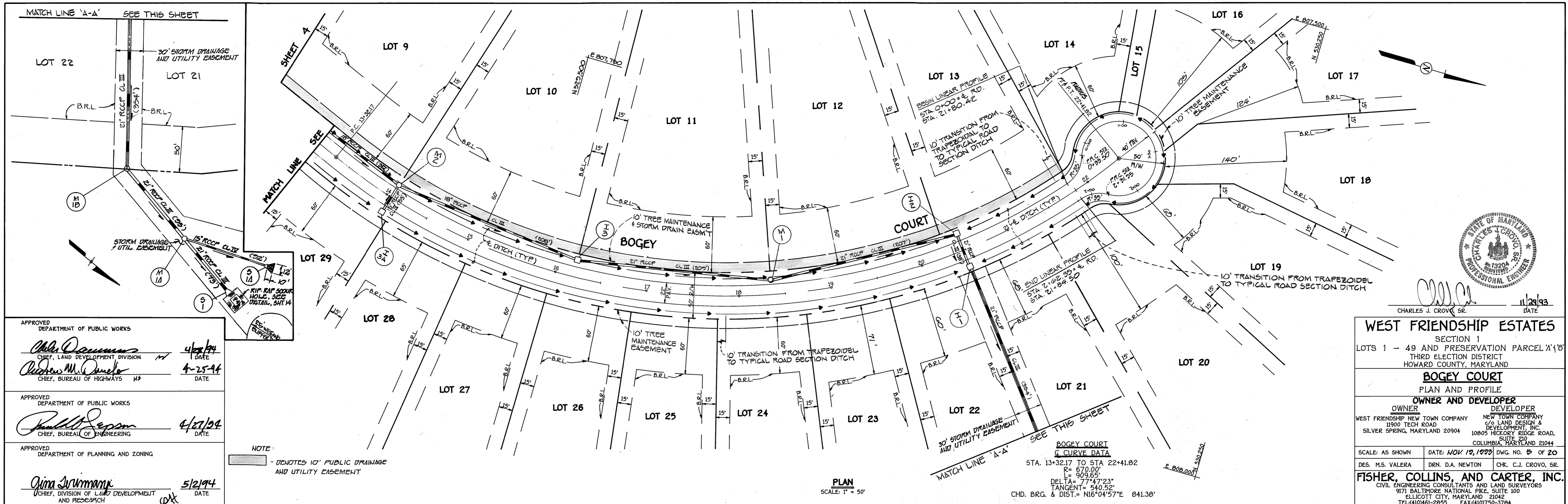
OWNER AND DEVELOPER
OWNER: WEST FRIENDSHIP NEW TOWN COMPANY
DEVELOPER: NEW TOWN COMPANY
C/O LAND DESIGN & DEVELOPMENT, INC.
SILVER SPRING, MARYLAND 20904
10805 HICKORY RIDGE ROAD, SUITE 210
COLUMBIA, MARYLAND 21044

SCALE: AS SHOWN
DATE: NOV 19, 1993
DWG. NO. 4 OF 20
DES. M.S. VALERA
DRN. D.A. NEWTON
CHK. C.J. CROVO, SR.

FISHER, COLLINS, AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
971 BALTIMORE NATIONAL PIKE, SUITE 100
ELLCOTT CITY, MARYLAND 21042
TEL: 410/461-2855 FAX: 410/750-3741



406



APPROVED
DEPARTMENT OF PUBLIC WORKS
Charles J. Crovo, Sr.
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 4/25/94

APPROVED
DEPARTMENT OF PUBLIC WORKS
Paul D. Seaton
CHIEF, BUREAU OF HIGHWAYS
DATE: 4/27/94

APPROVED
DEPARTMENT OF PLANNING AND ZONING
Anna Strumanni
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
DATE: 5/2/94

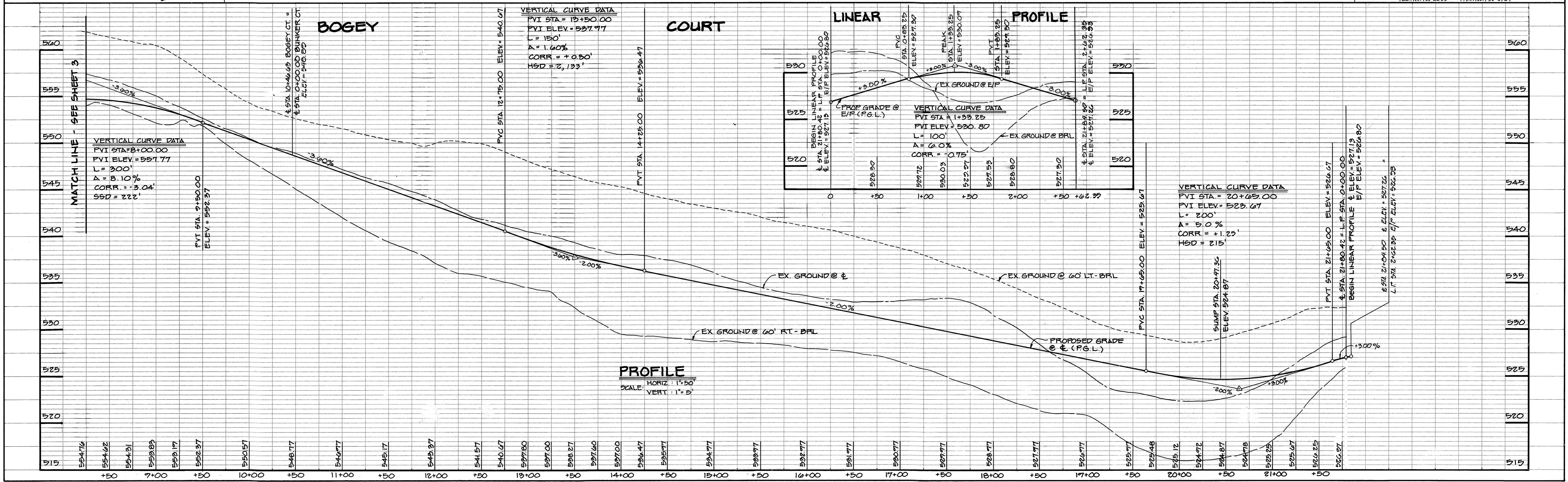
WEST FRIENDSHIP ESTATES
SECTION 1
LOTS 1 - 49 AND PRESERVATION PARCEL A'1'B'
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

BOGEY COURT
PLAN AND PROFILE

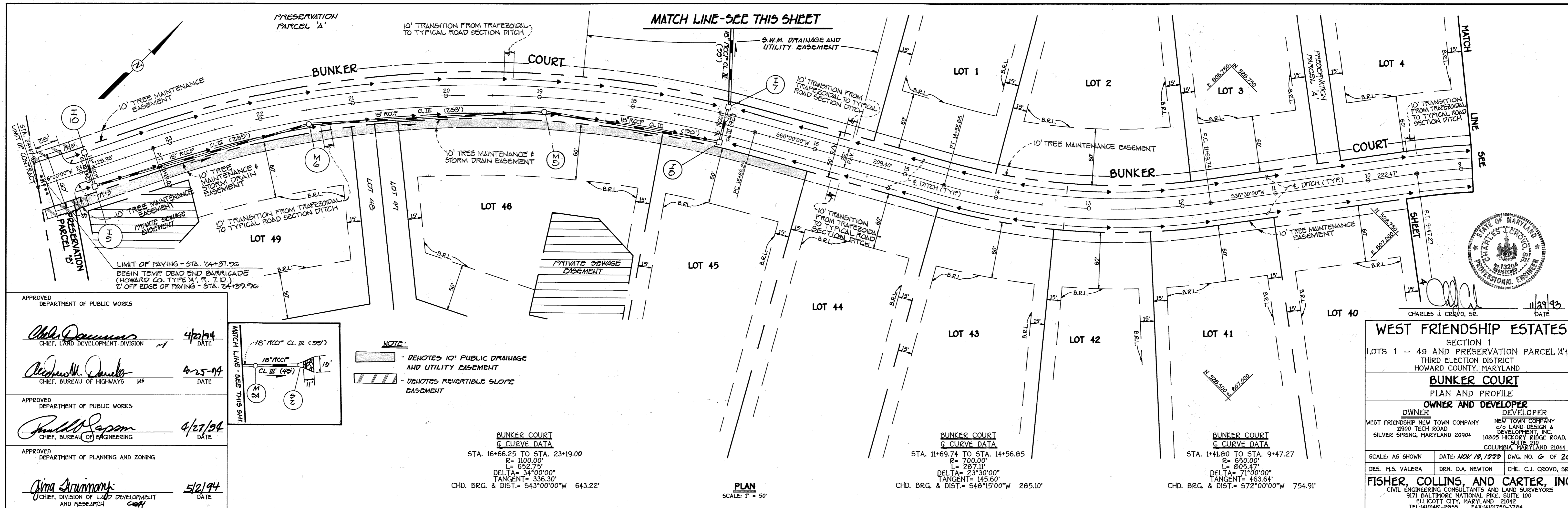
OWNER AND DEVELOPER
OWNER: WEST FRIENDSHIP NEW TOWN COMPANY
DEVELOPER: NEW TOWN COMPANY

SCALE: AS SHOWN
DATE: NOV 19, 1993
DES. M.S. VALERA
DRN. D.A. NEWTON
CHK. C.J. CROVO, SR.

FISHER, COLLINS, AND CARTER, INC.
CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
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WEST FRIENDSHIP ESTATES
 SECTION 1
 LOTS 1 - 49 AND PRESERVATION PARCEL A
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

BUNKER COURT
 PLAN AND PROFILE

OWNER AND DEVELOPER
 OWNER: WEST FRIENDSHIP NEW TOWN COMPANY
 DEVELOPER: NEW TOWN COMPANY
 11900 TECH ROAD, SILVER SPRING, MARYLAND 20904
 10805 HICKORY RIDGE ROAD, SUITE 210, COLUMBIA, MARYLAND 21044

SCALE: AS SHOWN DATE: NOV 19, 1999 DWG. NO. 6 OF 20
 DES. M.S. VALERA DRN. D.A. NEWTON CHK. C.J. CROVO, SR.
FISHER, COLLINS, AND CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS AND LAND SURVEYORS
 3171 BALTIMORE NATIONAL PIKE, SUITE 100
 ELLICOTT CITY, MARYLAND 21042
 TEL: (410) 461-2955 FAX: (410) 750-3784

APPROVED DEPARTMENT OF PUBLIC WORKS
Charles J. Crovo, Sr. 4/21/94 DATE
 CHIEF, LAND DEVELOPMENT DIVISION

APPROVED DEPARTMENT OF PUBLIC WORKS
Charles J. Crovo, Sr. 4-25-94 DATE
 CHIEF, BUREAU OF HIGHWAYS

APPROVED DEPARTMENT OF PUBLIC WORKS
Paul M. Sapon 4/22/94 DATE
 CHIEF, BUREAU OF ENGINEERING

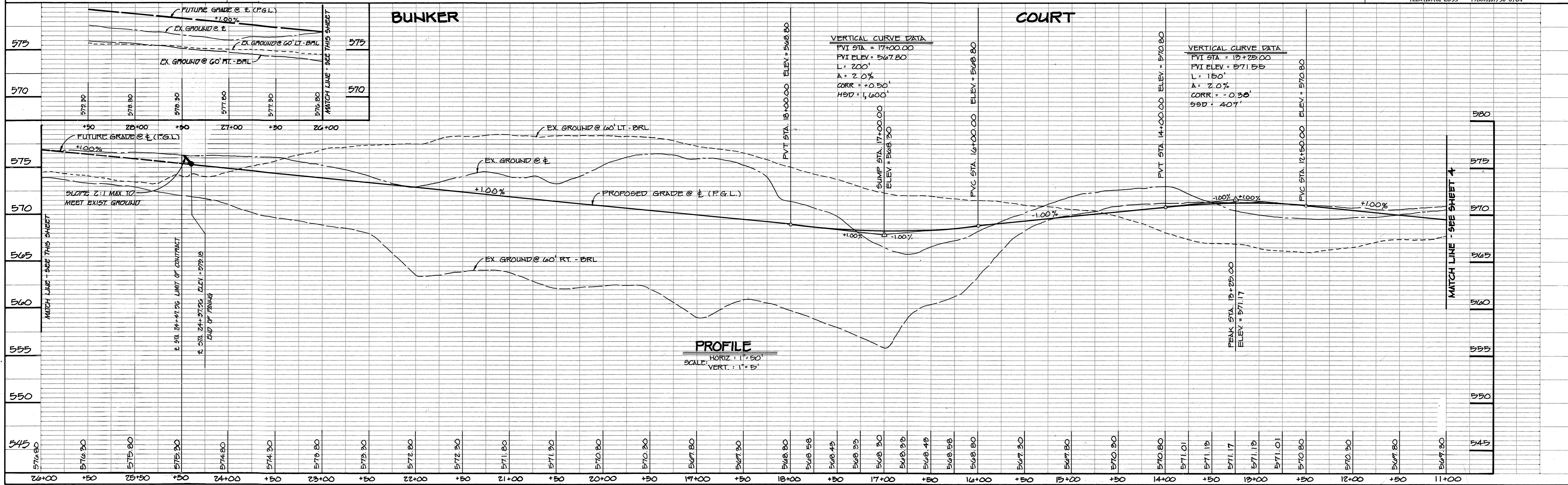
APPROVED DEPARTMENT OF PLANNING AND ZONING
Anna Strumonyk 5/2/94 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

NOTE:
 [Symbol] DENOTES 10' PUBLIC DRAINAGE AND UTILITY EASEMENT
 [Symbol] DENOTES REVERTIBLE SLOPE EASEMENT

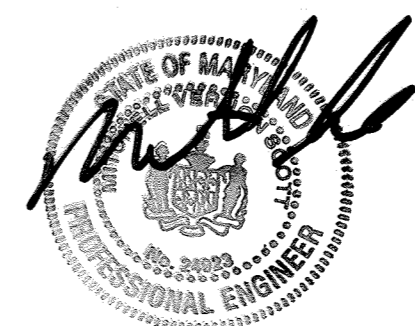
BUNKER COURT
 CURVE DATA
 STA. 16+66.25 TO STA. 23+19.00
 R = 1100.00'
 L = 652.75'
 DELTA = 34°00'00"
 TANGENT = 336.30'
 CHD. BRG. & DIST. = S43°00'00"W 643.22'

COURT
 CURVE DATA
 STA. 11+69.74 TO STA. 14+56.85
 R = 700.00'
 L = 287.11'
 DELTA = 23°30'00"
 TANGENT = 145.60'
 CHD. BRG. & DIST. = S48°15'00"W 285.10'

BUNKER COURT
 CURVE DATA
 STA. 1+41.80 TO STA. 9+47.27
 R = 650.00'
 L = 805.47'
 DELTA = 71°00'00"
 TANGENT = 453.64'
 CHD. BRG. & DIST. = S72°00'00"W 754.91'



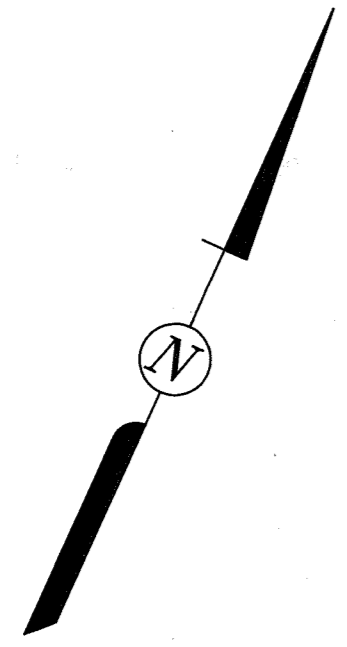
406



Name: Mitchell Scott
 Expiration: 04/25/2022
 Address: RK&K, 700 East Pratt St., Suite 500, Baltimore, MD 21202
 Phone: (410) 462-9215
 mscott@rk.com

ENGINEER'S CERTIFICATE	
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
SIGNATURE OF ENGINEER	11/29/21 DATE
DEVELOPER'S CERTIFICATE	
I HAVE CERTIFIED THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.	
SIGNATURE OF DEVELOPER	11/29/21 DATE
REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS	
Cathie Engle, S.	4/16/98 DATE
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY APPROVAL OF THE HOWARD SOIL CONSERVATION DISTRICT.	
Rod W. Cochran	4/16/98 DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
Jana Summers	5/2/99 DATE
APPROVED: DEPARTMENT OF PUBLIC WORKS	
Mitchell Scott	4/27/24 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
Charles M. Daniels	4-25-99 DATE

RESPONSIBILITY: ADDED REDLINE NO. 2 CROSS REFERENCE NOTES TO REFER TO NEW SHEETS THAT WERE DEVELOPED CONCEPTUALLY, NOT FOR CONSTRUCTION.



**POND NO. 1
PUBLIC STORM WATER MANAGEMENT FACILITY**

TYPE: SHALLOW MARSH / DEPRESSION
 HAZARD CLASS: "A"
 DRAINAGE AREA: 2.03 Ac. ±

	2 YEAR	10 YEAR	100 YEAR
ALLOWABLE RELEASE	0.00 c.f.s.	4.00 c.f.s.	10thre Amount
INFLOW TO FACILITY	2.20 c.f.s.	6.20 c.f.s.	12.80 c.f.s.
ACTUAL RELEASE	0.22 c.f.s.	3.40 c.f.s.	13.70 c.f.s.
ELEVATION @ DISCHARGE	534.25	535.25	535.51
STORAGE @ ELEVATION	0.008 A.F.F.	0.107 A.F.F.	0.128 A.F.F.
ROAD INVERT ELEVATION	532.00		
INVERT OF 3" DIA LOW FLOW ORIFICE	533.00		
SPILLWAY CREST ELEVATION	535.10		
TOP OF DAM ELEVATION	536.50		

TEMP SEDIMENT CONTROL BASIN
 DRAINAGE AREA = 2.03 AC. ±
 STORAGE REQ'D. = 5,274 C.F.
 STORAGE PROV'D. = 6,140 C.F.
 WEIR CREST ELEV. = 535.00
 BOTTOM ELEV. = 533.00
 CLEAN OUT ELEV. = 534.00
 DEPTH = 2.0'
 SIDE SLOPES = 4:1
 TOP EMBANKMENT = 536.50
 WEIR LENGTH = 20.0'

RIPRAP OUTLET SEDIMENT TRAP NO. 5
 DRAINAGE AREA = 1.40 AC. ±
 STORAGE REQ'D. = 2,520 C.F.
 STORAGE PROV'D. = 2,640 C.F.
 WEIR CREST ELEV. = 548.00
 BOTTOM ELEV. = 538.00
 CLEAN OUT ELEV. = 540.00
 DEPTH = 4.0'
 SIDE SLOPES = 1:1
 TOP EMBANKMENT = 544.00
 WEIR LENGTH = 10.0'

NOTE: THE EXISTING POND IS TO BE UPGRADED AT THE SITE DEVELOPMENT PLAN STAGE

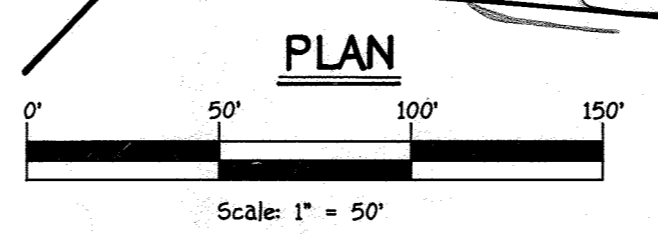
SEE SHEET NO. 18 - 20 FOR CHANGES IN THIS AREA

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 9171 BALTIMORE NATIONAL PIKE, SUITE 100
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2955

NO.	DESCRIPTION	DATE
1	ADDED SHEETS #18, #19, #20 - NEW BERMS	11/29/21

OWNER
 WEST FRIENDSHIP NEW TOWN COMPANY
 11900 TECH ROAD
 SILVER SPRING, MARYLAND 20904

DEVELOPER
 NEW TOWN COMPANY
 c/o LAND DESIGN & DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE 210
 COLUMBIA, MARYLAND 21044



STREET TREE, GRADING, SEDIMENT CONTROL & PERIMETER LANDSCAPE PLAN
WEST FRIENDSHIP ESTATES
 SECTION 1
 LOTS 1 - 49 AND PARCEL 'A' 1 'B'
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 NOV 19, 1993
 SCALE: AS SHOWN
 SHEET 7 OF 20



CHARLES J. CROVO, SR. DATE

TYPE 'A' LANDSCAPE EDGE (ADJACENT TO PRESERVATION PARCEL)
 435 LINEAR FEET
 1 SHADE TREE / 60 L.F. = 7
 TREE SPECIMEN - ACER RUBRUM (RED SUNSET RED MAPLE)

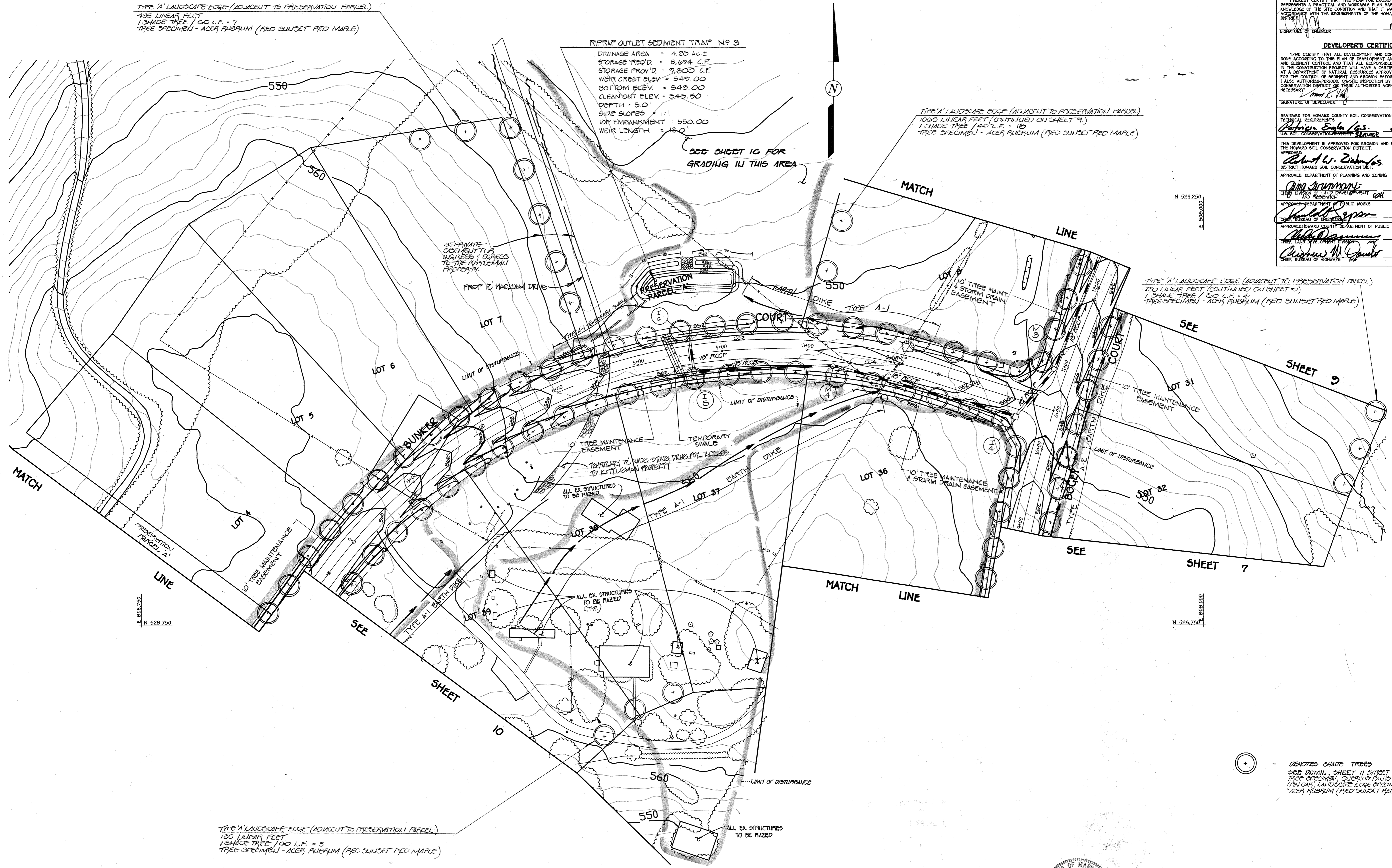
RIPRAP OUTLET SEDIMENT TRAP No 3
 DRAINAGE AREA = 4.83 AC.±
 STORAGE REQ'D. = 8,674 C.F.
 STORAGE PROVIDED = 9,300 C.F.
 WEIR CREST ELEV. = 549.00
 BOTTOM ELEV. = 543.00
 CLEANOUT ELEV. = 545.50
 DEPTH = 5.0'
 SIDE SLOPES = 1:1
 TOP EMBANKMENT = 550.00
 WEIR LENGTH = 18.0'

TYPE 'A' LANDSCAPE EDGE (ADJACENT TO PRESERVATION PARCEL)
 1005 LINEAR FEET (CONTINUED ON SHEET 9)
 1 SHADE TREE / 60 L.F. = 12
 TREE SPECIMEN - ACER RUBRUM (RED SUNSET RED MAPLE)

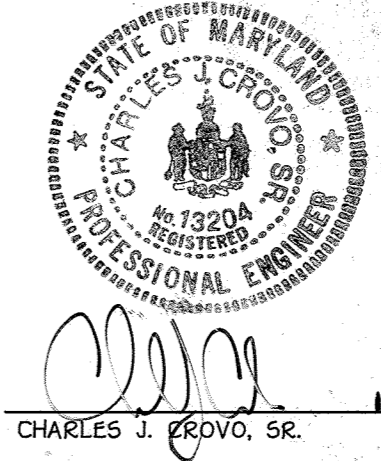
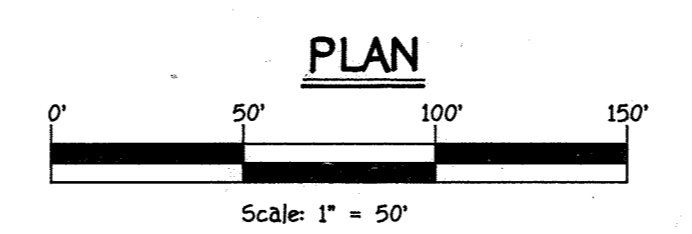
TYPE 'A' LANDSCAPE EDGE (ADJACENT TO PRESERVATION PARCEL)
 220 LINEAR FEET (CONTINUED ON SHEET 7)
 1 SHADE TREE / 60 L.F. = 4
 TREE SPECIMEN - ACER RUBRUM (RED SUNSET RED MAPLE)

TYPE 'A' LANDSCAPE EDGE (ADJACENT TO PRESERVATION PARCEL)
 100 LINEAR FEET
 1 SHADE TREE / 60 L.F. = 3
 TREE SPECIMEN - ACER RUBRUM (RED SUNSET RED MAPLE)

ENGINEER'S CERTIFICATE	
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
SIGNATURE OF ENGINEER	11/23/93 DATE
DEVELOPER'S CERTIFICATE	
I HAVE CERTIFIED THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.	
SIGNATURE OF DEVELOPER	11/23/93 DATE
REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.	
Patricia Engle G.S.	4/2/94 DATE
U.S. SOIL CONSERVATION DISTRICT SERVICE	
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
Robert W. Ziemba G.S.	4/19/94 DATE
DISTRICT HOWARD SOIL CONSERVATION DIST.	
APPROVED DEPARTMENT OF PLANNING AND ZONING	
Jim Drummond	5/19/94 DATE
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH	
Robert S. Spon	4/27/94 DATE
APPROVED DEPARTMENT OF PUBLIC WORKS	
Mike Drummond	4/27/94 DATE
CHIEF, LAND DEVELOPMENT DIVISION	
Charles M. Dwyer	4-25-94 DATE
CHIEF, BUREAU OF HIGHWAYS	



⊕ DENOTES SHADE TREES
 SEE DETAIL, SHEET 11 STREET TREE SPECIMEN - QUERCUS FALLOSTRO (PIN OAK) LANDSCAPE EDGE SPECIMEN - ACER RUBRUM (RED SUNSET RED MAPLE)



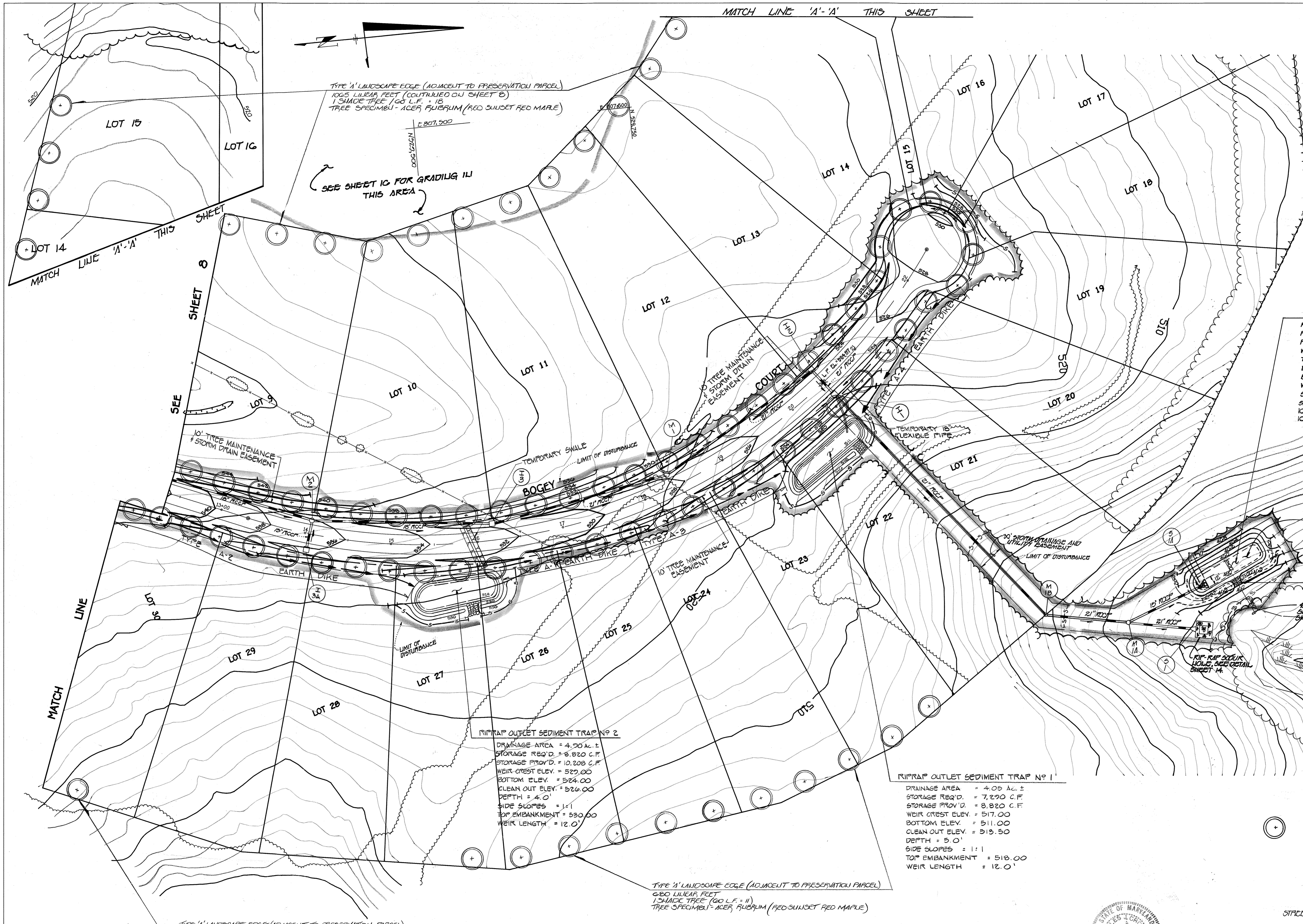
STREET TREE, GRADING, SEDIMENT CONTROL & PERIMETER LANDSCAPE PLAN
WEST FRIENDSHIP ESTATES
 SECTION 1
 LOTS 1 - 9 AND PARCEL 'A' 'B'
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 NOV 19, 1993
 SCALE: AS SHOWN
 SHEET 8 OF 20

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 971 BALTIMORE NATIONAL PIKE, SUITE 100
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2955

OWNER
 WEST FRIENDSHIP NEW TOWN COMPANY
 11900 TECH ROAD
 SILVER SPRING, MARYLAND 20904

DEVELOPER
 NEW TOWN COMPANY
 c/o LAND DESIGN & DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE 210
 COLUMBIA, MARYLAND 21044

406



ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE OF ENGINEER: *Charles J. Grovo* DATE: 11/29/93

DEVELOPER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
 SIGNATURE OF DEVELOPER: *Patricia Engle* DATE: 11/28/93

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 SIGNATURE: *Patricia Engle* DATE: 11/18/93
 TITLE: SOIL CONSERVATION DISTRICT SERVICE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY APPROVAL OF THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE: *Robert W. Ziehm* DATE: 1/14/94
 TITLE: DISTRICT HOWARD SOIL CONSERVATION DIST.

APPROVED, DEPARTMENT OF PLANNING AND ZONING
 SIGNATURE: *Anna Sammons* DATE: 5/21/94
 TITLE: CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED, DEPARTMENT OF PUBLIC WORKS
 SIGNATURE: *Richard Sapan* DATE: 4/27/94
 TITLE: CHIEF, BUREAU OF ENGINEERING

APPROVED, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 SIGNATURE: *Charles J. Grovo* DATE: 4/20/94
 TITLE: CHIEF, LAND DEVELOPMENT DIVISION

APPROVED, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 SIGNATURE: *Andrew M. Dwyer* DATE: 4-15-94
 TITLE: CHIEF, BUREAU OF HIGHWAYS

WATER QUALITY POND (CLASS 'A')
 REQUIRED VOLUME : 2,358 C.F. (See Water Quality Comp's)
 PROVIDED VOLUME : 3,132 C.F.
 POND LENGTH : 453.00
 WEIR CREST ELEV. : 402.00 (Top 1" Thick Stone)
 TOP OF DAM ELEV. : 403.00
 DEPTH : 2.0'
 BOTTOM DIMENSIONALS : 85' x 10'
 WEIR CREST WIDTH : 10'
 SIDE SLOPES : 2 : 1
 SEE SHEET 15 FOR PROFILES
 10 YEAR Q = 5.70 cfs.
 10 YEAR ELEVATION = 402.37 (FROM CREST ELEV.)

WATER QUALITY POND
 5' TOP OF DAM, SEE PROFILE, SHEET 10
 10' RIP-RAP FILTER CLAY
 10' EMERGENCY SILLWAY, SEE PROFILE SHEET 12
 10' RIP-RAP SILLWAY, SEE DETAIL SHEET 14
 25' WETLAND BUFFER
 WETLANDS

406

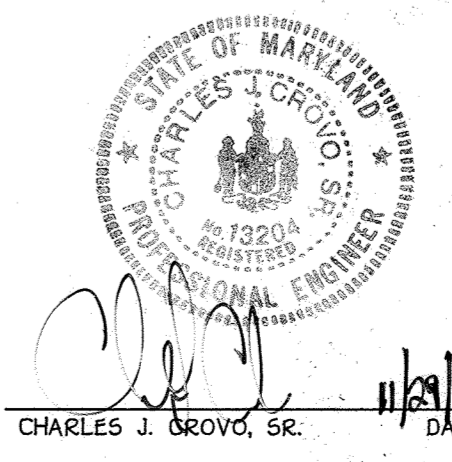
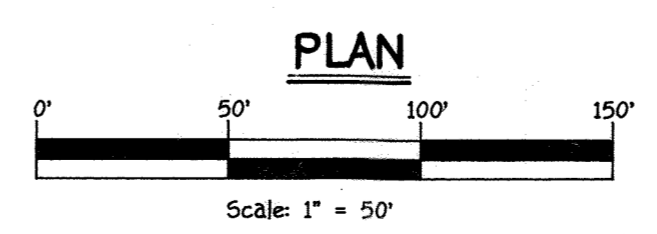
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 971 BALTIMORE NATIONAL PIKE, SUITE 100
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2255

TYPE 'A' LANDSCAPE EDGE (ADJACENT TO PRESERVATION PARCEL)
 230' LINEAR FEET (CONTINUED ON SHEET B)
 1 SHADE TREE (60 L.F. = 4)
 TREE SPECIMEN - ACER RUBRUM (RED SUNSET RED MAPLE)

OWNER
 WEST FRIENDSHIP NEW TOWN COMPANY
 11900 TECH ROAD
 SILVER SPRING, MARYLAND 20904

DEVELOPER
 NEW TOWN COMPANY
 c/o LAND DESIGN & DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE 210
 COLUMBIA, MARYLAND 21044

TYPE 'A' LANDSCAPE EDGE (ADJACENT TO PRESERVATION PARCEL)
 680' LINEAR FEET
 1 SHADE TREE (60 L.F. = 11)
 TREE SPECIMEN - ACER RUBRUM (RED SUNSET RED MAPLE)



CHARLES J. GROVO, SR. DATE: 11/29/93

STREET TREE, GRADING, SEDIMENT CONTROL & PERIMETER LANDSCAPE PLAN
WEST FRIENDSHIP ESTATES
 SECTION 1
 LOTS 1 - 49 AND PARCEL 'A' & 'B'
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 NOV 12, 1993
 SCALE AS SHOWN
 SHEET 9 OF 20

**POUND NO. 2
PUBLIC STORM WATER MANAGEMENT FACILITY**

TYPE: WET POUND DETENTION
HAZARD CLASS: A
DRAINAGE AREA: 6.76 AC. ±

	2 YEAR	10 YEAR	100 YEAR
ALLOWABLE RELEASE	0	0.19 C.F.S.	Entire Amount
INFLOW TO FACILITY	5.72 C.F.S.	17.07 C.F.S.	22.25 C.F.S.
ACTUAL RELEASE	0.10 C.F.S.	5.50 C.F.S.	20.00 C.F.S.
ELEV. @ DISCHARGE	540.40	540.87	541.80
STORAGE @ ELEV.	0.274 A.I./H.	0.325 A.I./H.	0.558 A.I./H.
PERMANENT POOL ELEVATION	539.00		
INVERT OF 2' DIA. LOW FLOW	538.83		
RISER CREST ELEVATION	540.40 / 540.90		
SEILWAY CREST ELEVATION	11/1		
TOP OF DAM ELEVATION	543.50		

MATCH LINE - SEE THIS SHEET

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
SIGNATURE OF ENGINEER: *Charles Crovo* DATE: 11/23/94

DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE 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. I ALSO SUPPORTED PERSONAL ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
SIGNATURE OF DEVELOPER: *John W. Egan* DATE: 11/23/94

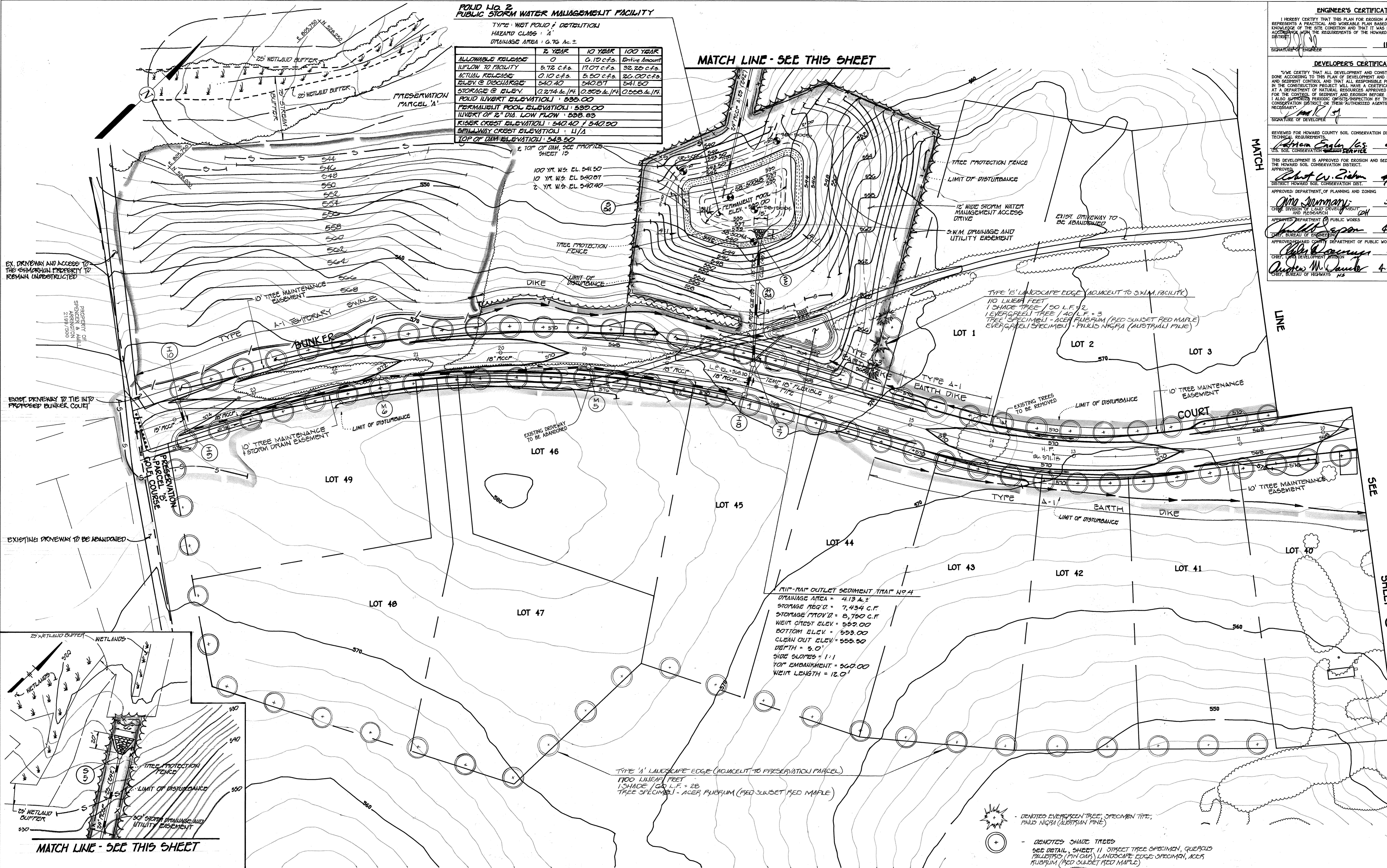
REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
John W. Egan DATE: 4/10/94
DIST. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John W. Egan DATE: 4/10/94
DISTRICT HOWARD SOIL CONSERVATION DIST.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Anna Summary DATE: 5/2/94
CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: DEPARTMENT OF PUBLIC WORKS
Paul J. Egan DATE: 4/27/94
CHIEF, BUREAU OF ENGINEERING

APPROVED: DEPARTMENT OF PUBLIC WORKS
Charles Crovo DATE: 4/27/94
CHIEF, BUREAU OF HIGHWAYS



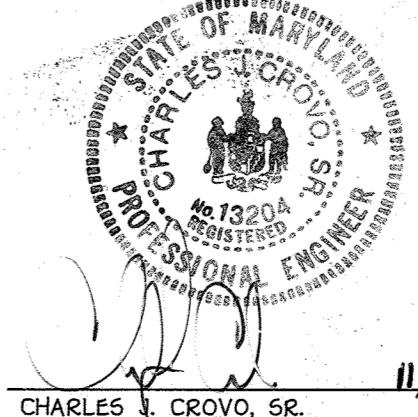
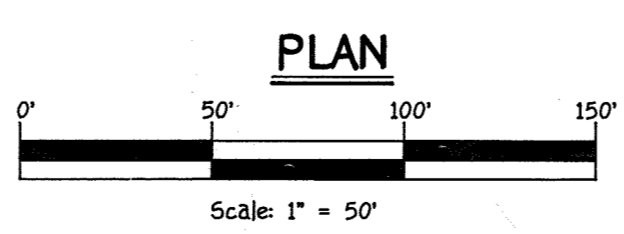
MATCH LINE - SEE THIS SHEET

SEE SHEET 8

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
971 BALTIMORE NATIONAL PIKE, SUITE 100
ELLICOTT CITY, MARYLAND 21042
(410) 461-2955

OWNER
WEST FRIENDSHIP NEW TOWN COMPANY
11900 TECH ROAD
SILVER SPRING, MARYLAND 20904

DEVELOPER
NEW TOWN COMPANY
c/o LAND DESIGN & DEVELOPMENT, INC.
10805 HICKORY RIDGE ROAD, SUITE 210
COLUMBIA, MARYLAND 21044



CHARLES CROVO, SE. DATE: 11/23/94

STREET TREE, GRADING, SEDIMENT CONTROL & PERIMETER LANDSCAPE PLAN
WEST FRIENDSHIP ESTATES
SECTION 1
LOTS 1 - 49 AND PARCEL 'A' & 'B'
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
NOV. 19, 1993
SCALE: AS SHOWN
SHEET 10 OF 20

APPROVED DEPARTMENT OF PLANNING AND ZONING
Chris Summank 5/2/94
 DATE
 APPROVED DEPARTMENT OF PUBLIC WORKS
John Egan 4/27/94
 DATE
 APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chris Summank 4/27/94
 DATE
Robert M. Daniels 4-15-94
 DATE

STRUCTURE SCHEDULE

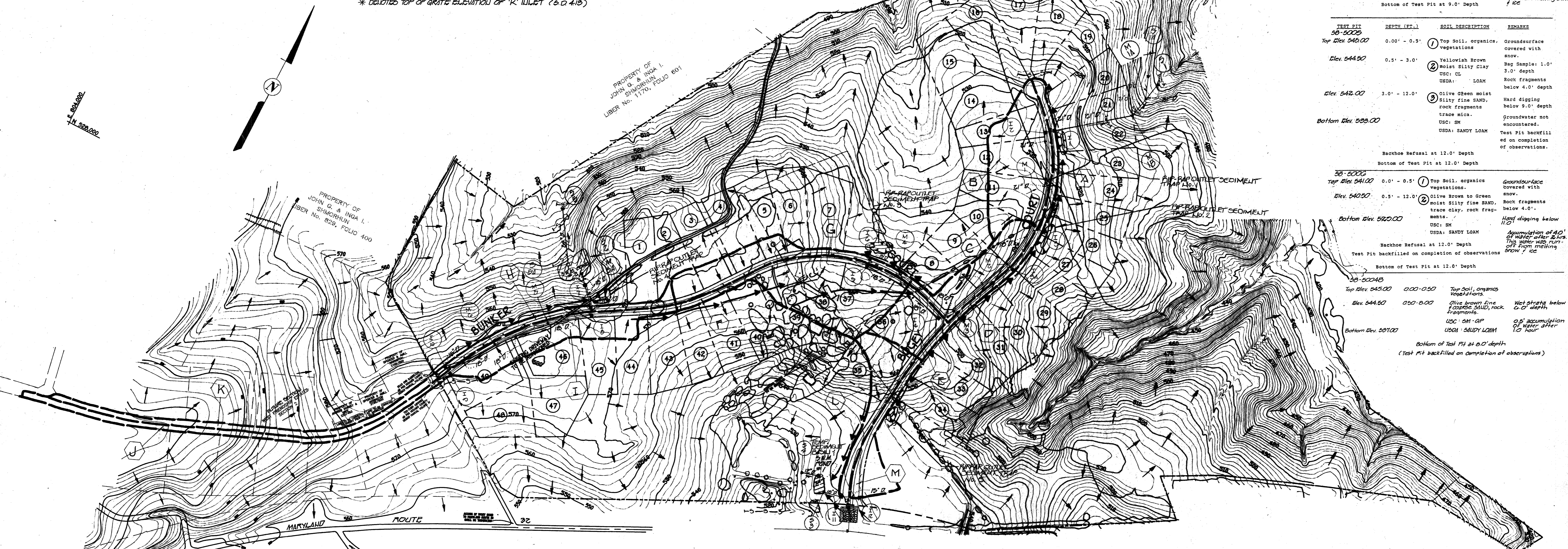
STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	± ROAD STA.	OFFSET	TYPE	REMARKS
I-1	* 524.22	578.66	511.50	BOGEY COURT	+ STA. 20+47.36	10' RT.	'K' IULET	SD 4.13
I-2	* 524.22	578.71	578.66	BOGEY COURT	+ STA. 20+47.36	10' LT.	'K' IULET	SD 4.13
I-3A	* 526.22	---	526.22	BOGEY COURT	+ STA. 14+00	10' RT.	'K' IULET	SD 4.13
I-3	* 526.22	526.56	526.27	BOGEY COURT	+ STA. 16+20	10' LT.	'K' IULET	SD 4.13
I-4	* 540.25	542.70	542.00	BULKER COURT	+ STA. 0+40	21' LT.	'K' IULET	SD 4.13
I-5	* 551.27	547.12	546.87	BULKER COURT	+ STA. 4+38.45	21' LT.	'K' IULET	SD 4.13
I-6	* 551.27	---	547.54	BULKER COURT	+ STA. 4+38.45	21' RT.	'K' IULET	SD 4.13
I-7	* 561.53	561.03	559.00	BULKER COURT	+ STA. 17+00	21' RT.	'K' IULET	SD 4.13
I-8	* 561.53	562.56	562.31	BULKER COURT	+ STA. 17+00	21' LT.	'K' IULET	SD 4.13
I-9	* 573.23	560.12	560.87	BULKER COURT	+ STA. 23+00	21' LT.	'K' IULET	SD 4.13
I-10	* 573.23	---	562.34	BULKER COURT	+ STA. 23+00	21' RT.	'K' IULET	SD 4.13
I-11	* 530.13	534.06	533.81	BOGEY COURT	+ STA. 1+50	44' LT.	'K' IULET	SD 4.13
I-12	* 530.13	---	534.50	BOGEY COURT	+ STA. 1+50	44' RT.	'K' IULET	SD 4.13
M-1	571.80	573.51	573.26	BOGEY COURT	+ STA. 14+00	13' LT.	STD. M.H.	G. 5.12
M-2	526.42	531.76	531.51	BOGEY COURT	+ STA. 14+00	13' LT.	STD. M.H.	G. 5.12
M-3	546.74	541.06	540.81	BOGEY COURT	+ STA. 10+24	13' LT.	STD. M.H.	G. 5.12
M-4	523.66	542.23	544.08	BULKER COURT	+ STA. 2+07	14' LT.	STD. M.H.	G. 5.12
M-5	520.23	524.00	524.00	BULKER COURT	+ STA. 13+24	14' LT.	STD. M.H.	G. 5.12
M-6	571.79	567.68	567.43	BULKER COURT	+ STA. 21+50	14' LT.	STD. M.H.	G. 5.12
O-1	452.34	457.52	457.17	---	N 530.538	---	COAL. EVID. SECTION	SD 5.51
O-2	540.56	532.06	532.00	---	N 529.128	---	COAL. EVID. SECTION	SD 5.51
O-3	534.20	533.46	533.43	---	N 528.914	---	COAL. EVID. SECTION	SD 5.51
M-1A	461.00	462.75	462.20	---	N 528.627	---	STD. M.H.	G. 5.12
M-1B	481.00	477.10	462.20	---	N 528.112	---	STD. M.H.	G. 5.12
S-5	524.40	522.40	522.04	---	N 528.410	---	COAL. EVID. SECTION	SD 5.51
S-4	522.85	521.85	521.51	---	N 528.127	---	METAL EVID. SECTION	SD 5.51
S-1A	460.37	459.12	459.00	---	N 528.110	---	COAL. EVID. SECTION	SD 5.51
S-5A	540.20	538.83	538.00	---	N 528.112	---	COAL. RIDGE	SEE DETAIL, SHT 13

DRAINAGE AREAS

INLET	D.A.#	AREA AC.±	'C'	ZONED	%IMP
I-1	A	0.50 Ac.±	0.62	RC	62%
I-2	B	3.24 Ac.±	0.31	RC	16%
I-3	C	1.56 Ac.±	0.37	RC	23%
I-3A	D	0.34 Ac.±	0.50	RC	44%
I-4	E	1.22 Ac.±	0.32	RC	17%
I-5	F	3.78 Ac.±	0.31	RC	16%
I-6	G	1.01 Ac.±	0.41	RC	30%
I-7	H	0.73 Ac.±	0.47	RC	38%
I-8	I	2.30 Ac.±	0.27	RC	13%
I-9	J	1.00 Ac.±	0.51	RC	44%
I-10	K	1.02 Ac.±	0.50	RC	44%
I-11	L	1.40 Ac.±	0.26	RC	13%
I-12	M	0.70 Ac.±	0.28	RC	14%

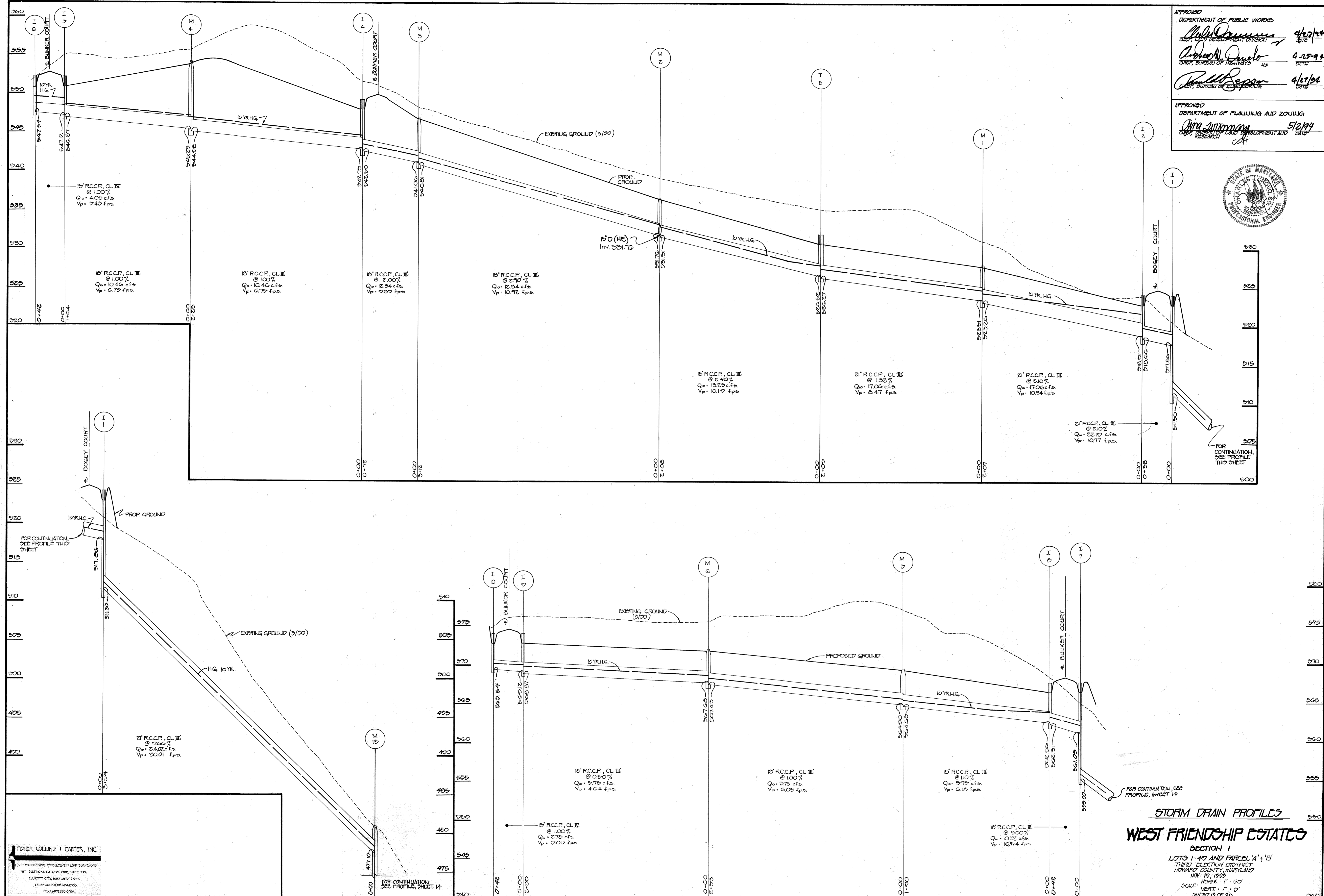
SUMMARY OF TEST PITS

TEST PIT	DEPTH (FT.)	SOIL DESCRIPTION	REMARKS
5B-5001 Top Elev. 530.25 Elev. 536.00	0.00' - 0.25' 0.25' - 4.0'	Top Soil, organics Vegetations Strong Brown moist Silty CLAY, trace sand. USC: CH USDA: SILTY CLAY	Groundsurface covered with snow, brush Rock fragments below 6.0' Hard digging below 10.0'
5B-5002 Top Elev. 538.25 Elev. 538.00	4.0' - 16.0'	Yellowish Brown to Olive Green moist Silty SAND, rock fragments, trace clay. USC: SM USDA: SANDY LOAM	Groundwater not encountered. Test pit back- filled on comple- tion of observations.
5B-5003 Top Elev. 536.00 Elev. 535.75	0.00' - 0.25' 0.25' - 4.0'	Top Soil, Vegetation organics Silty CLAY, trace sand. USC: CH USDA: SILTY CLAY	Groundsurface covered with snow, grass. Rock below 5.0' depth. Hard digging below 6.0'.
5B-5004 Top Elev. 540.50 Elev. 540.00	0.00' - 0.50' 0.50' - 9.0'	Top Soil, organics Vegetation Olive Brown to Green moist Silty fine SAND, trace clay, rock frag- ments USC: SM USDA: SANDY LOAM	Groundwater not encountered. Test Pit back- filled on comple- tion of observa- tions.
5B-5005 Top Elev. 544.50 Elev. 542.00	0.00' - 0.5' 0.5' - 9.0'	Top Soil, organics, Vegetations Olive Brown to Green moist Silty fine SAND, trace clay, rock frag- ments USC: SM USDA: SANDY LOAM	Groundsurface covered with snow. Rock fragments below 6.0'. Hard digging below 7.0' depth.
5B-5006 Top Elev. 548.50 Elev. 548.00	0.00' - 0.5' 0.5' - 3.0'	Top Soil, organics, Vegetations Yellowish Brown moist Silty Clay USC: CL USDA: LOAM	Groundsurface covered with snow. Bag Sample: 1.0' 3.0' depth Rock fragments below 4.0' depth
5B-5007 Top Elev. 548.00 Elev. 542.00	0.00' - 0.5' 0.5' - 12.0'	Top Soil, organics Vegetations Olive Brown to Green moist Silty fine SAND, trace clay, rock frag- ments USC: SM USDA: SANDY LOAM	Groundwater not encountered. Test Pit backfill- ed on completion of observations.
5B-5008 Top Elev. 544.50 Elev. 542.00	0.00' - 0.5' 0.5' - 12.0'	Top Soil, organics Vegetations Olive Brown to Green moist Silty fine SAND, trace clay, rock frag- ments USC: SM USDA: SANDY LOAM	Groundsurface covered with snow. Rock fragments below 4.0'. Hard digging below 11.0'
5B-5009 Top Elev. 548.50 Elev. 548.00	0.00' - 0.5' 0.5' - 12.0'	Top Soil, organics Vegetations Olive Brown to Green moist Silty fine SAND, trace clay, rock frag- ments USC: SM USDA: SANDY LOAM	Groundsurface covered with snow. Rock fragments below 4.0'. Hard digging below 11.0'
5B-5004B Top Elev. 548.50 Elev. 544.50	0.00' - 0.50' 0.50' - 6.00'	Top Soil, organics Vegetations Olive Brown fine COARSE SAND, rock fragments. USC: SM-GP USDA: SANDY LOAM	Hard digging below 6'-0" depth. O.S. accumulation of water after 1.0 hour



APPROVED
 DEPARTMENT OF PUBLIC WORKS
John P. ... 4/27/04
 CHIEF, LAND DEVELOPMENT DIVISION
Andrew M. ... 4-25-04
 CHIEF, BUREAU OF HIGHWAYS
Paul ... 4/27/04
 CHIEF, BUREAU OF ENGINEERING

APPROVED
 DEPARTMENT OF PLANNING AND ZONING
Anna ... 5/2/04
 CHIEF, BUREAU OF LAND DEVELOPMENT AND RESEARCH

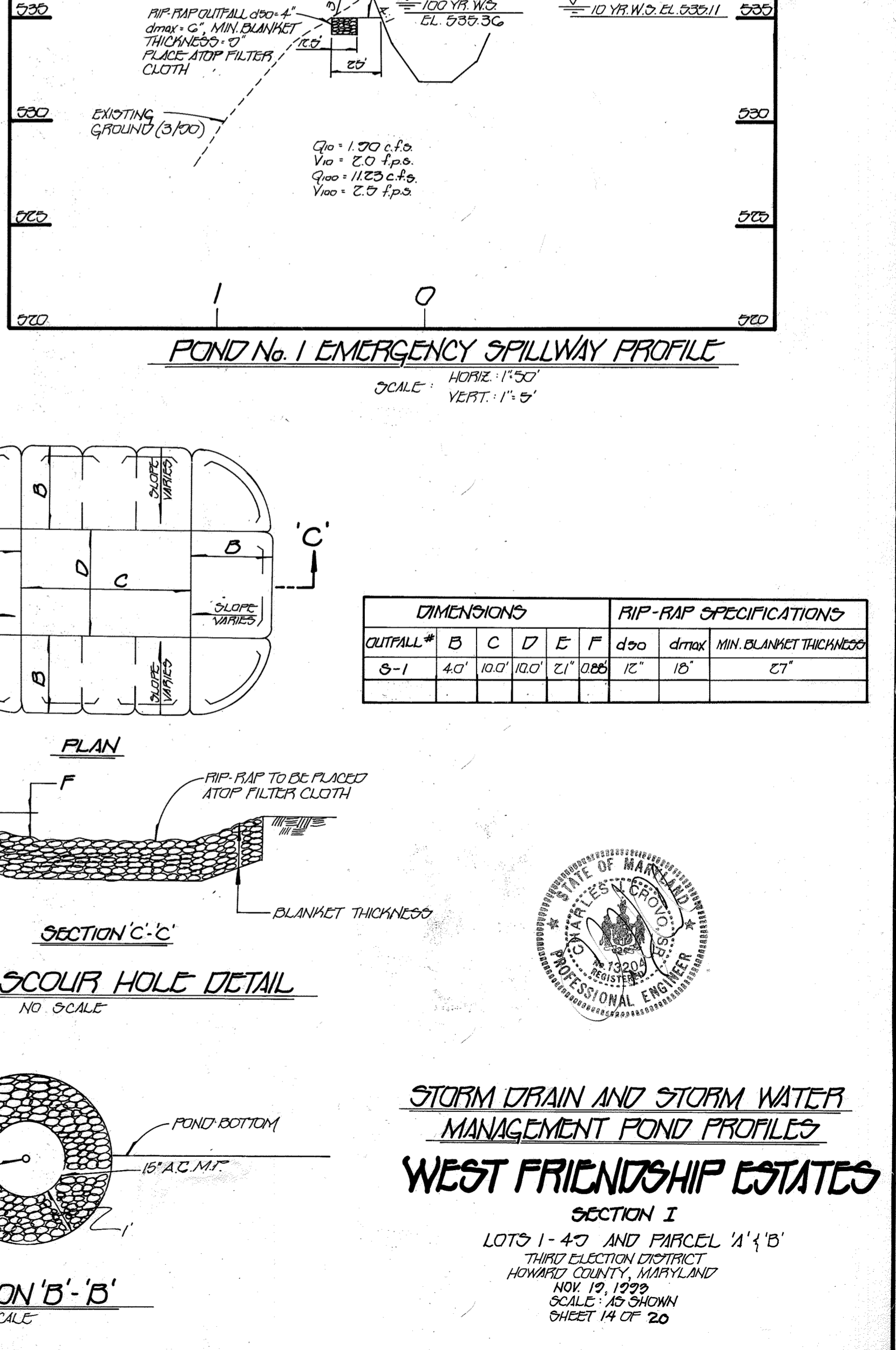
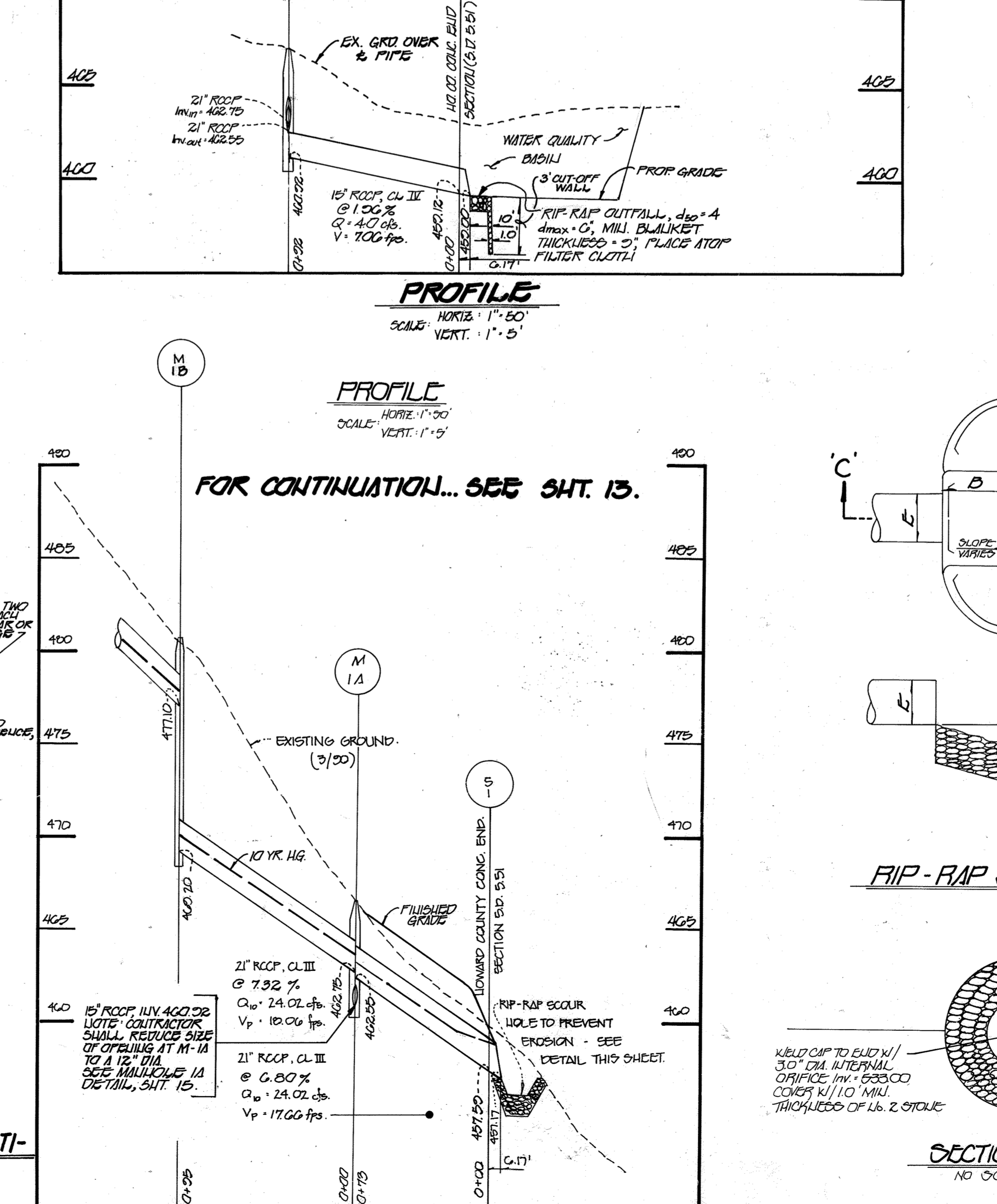
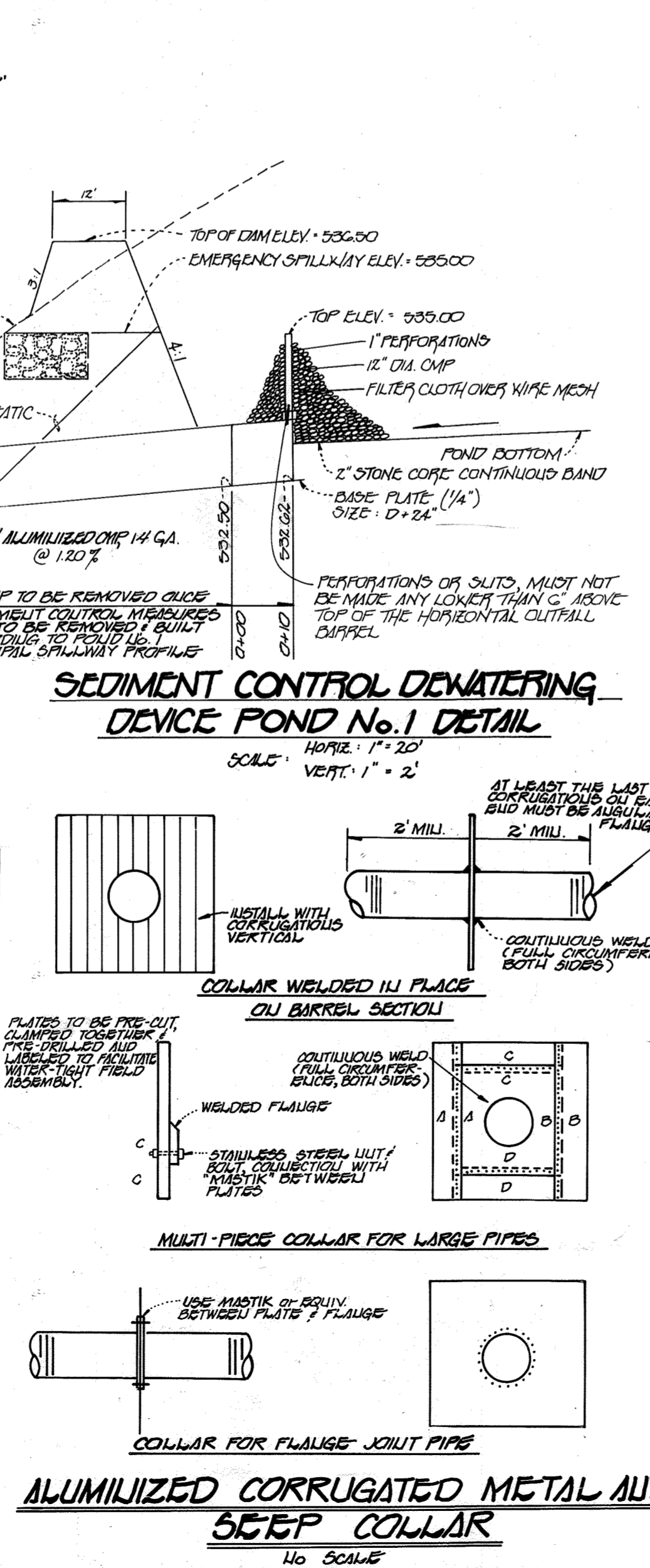
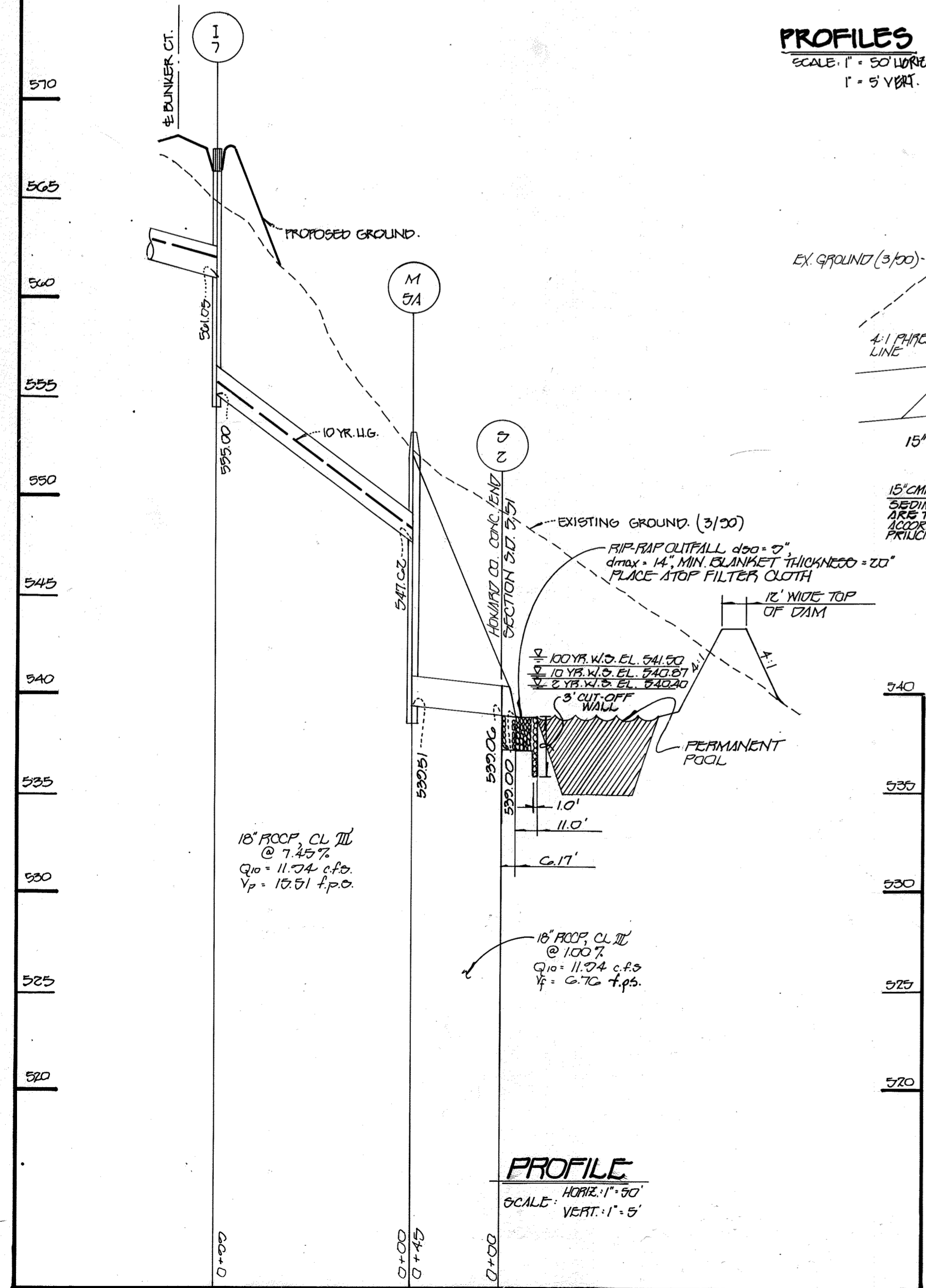
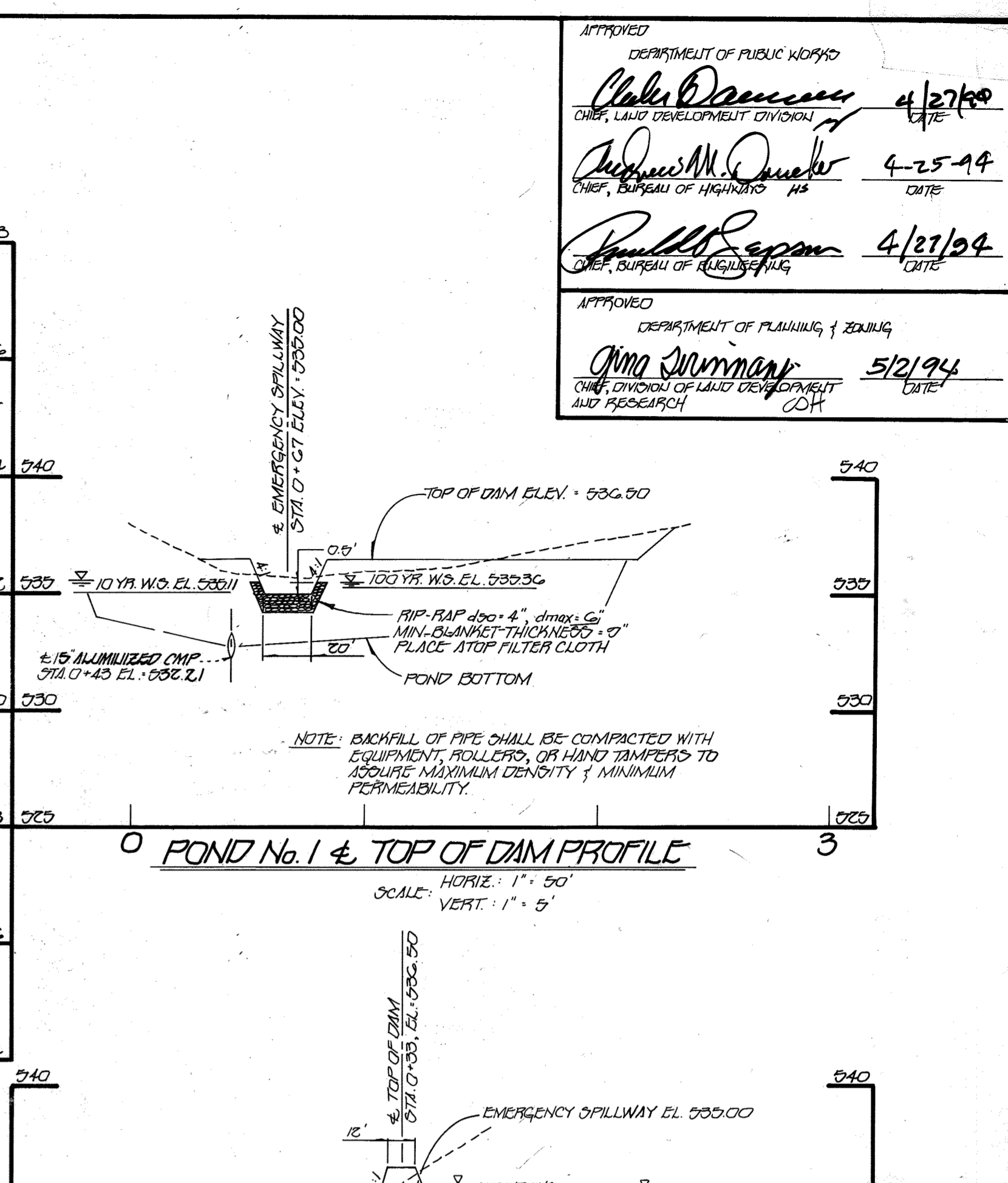
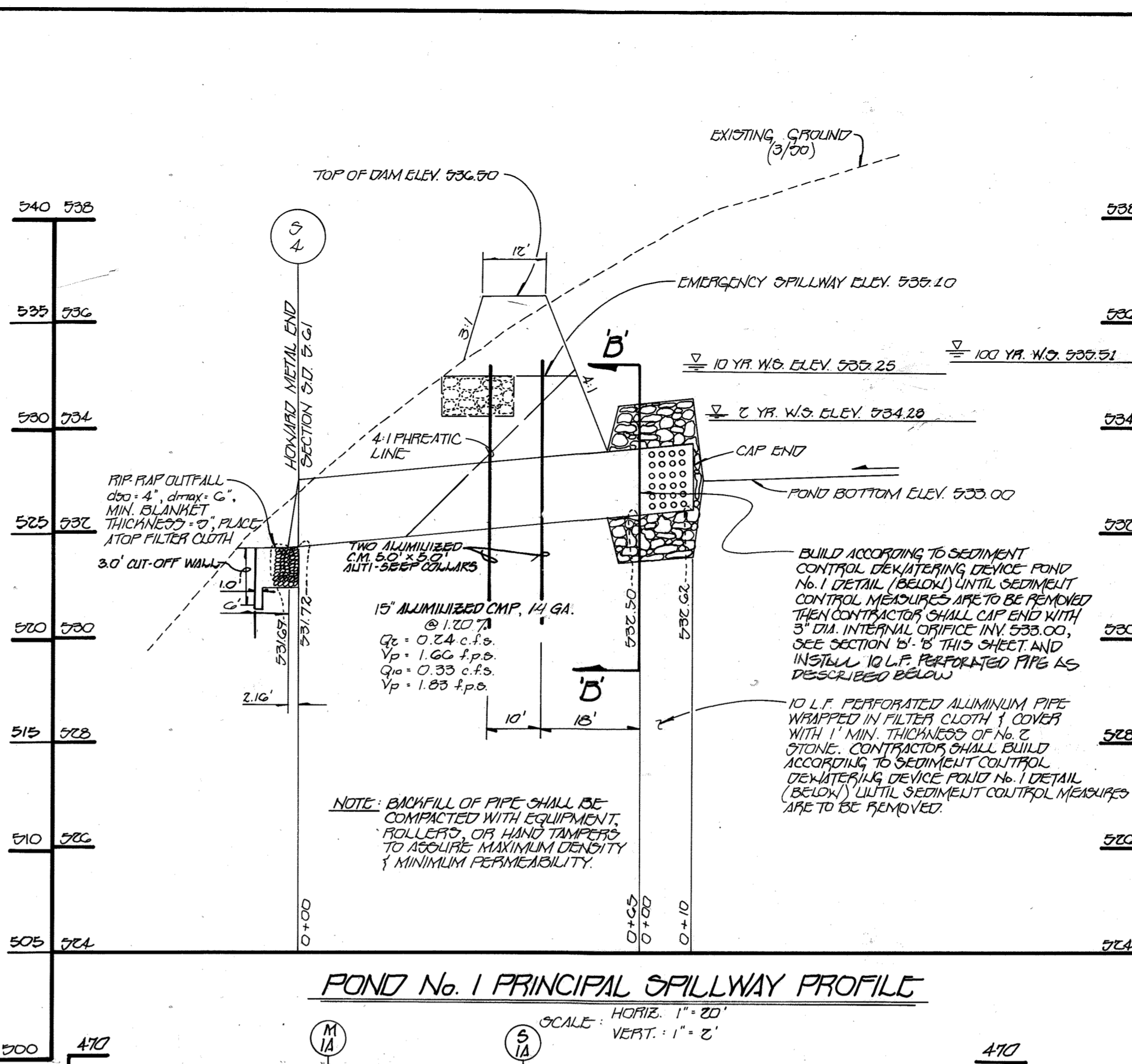
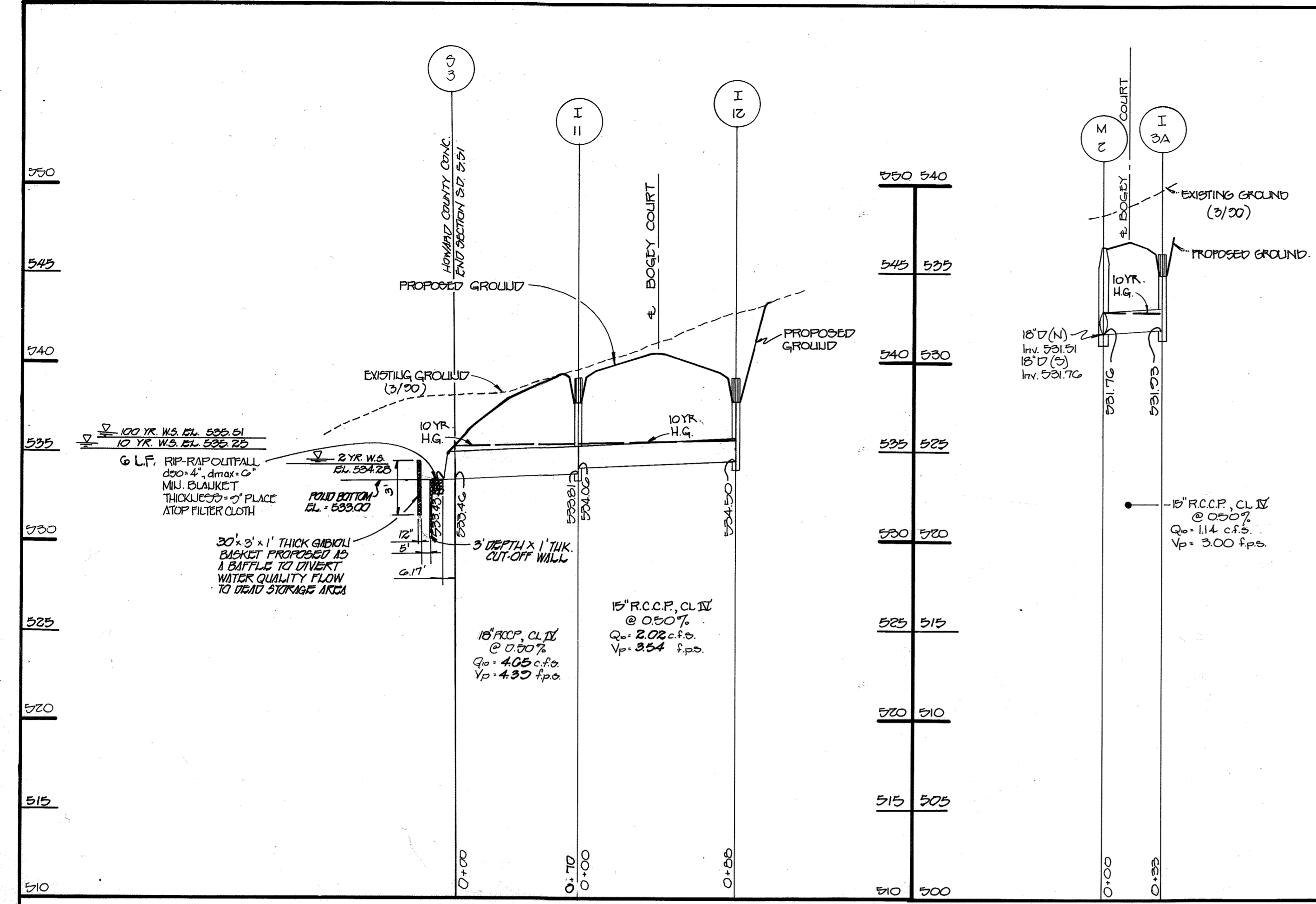


STORM DRAIN PROFILES
WEST FRIENDSHIP ESTATES
 SECTION 1
 LOTS 1-40 AND PARCEL A'1'B'
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 NOV. 12, 1998
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 5'
 SHEET 13 OF 20

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 7311 DULLES PARKWAY, SUITE 100
 CLUETT CITY, MARYLAND 21046
 TELEPHONE: (410) 461-0225
 FAX: (410) 461-3784

406

APPROVED
 DEPARTMENT OF PUBLIC WORKS
John D. ... 4/27/90
 CHIEF, LAND DEVELOPMENT DIVISION
James M. ... 4-25-94
 CHIEF, BUREAU OF HIGHWAYS
Paul ... 4/27/94
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED
 DEPARTMENT OF PLANNING & ZONING
Anna ... 5/2/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH



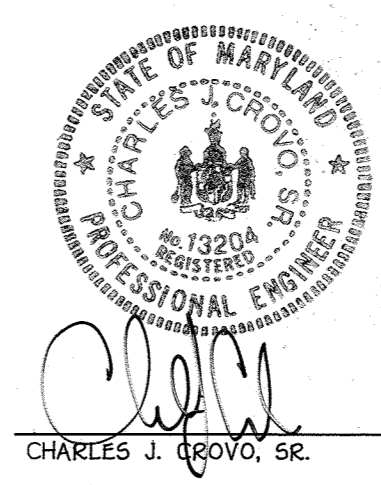
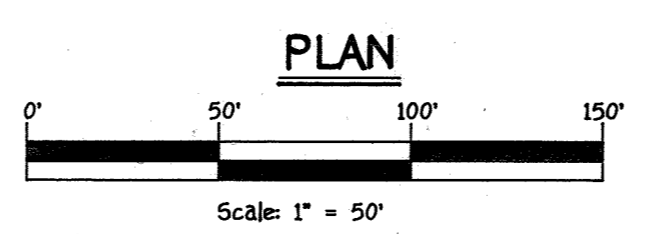
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406

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 9171 BALTIMORE NATIONAL PIKE, SUITE 100
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2955

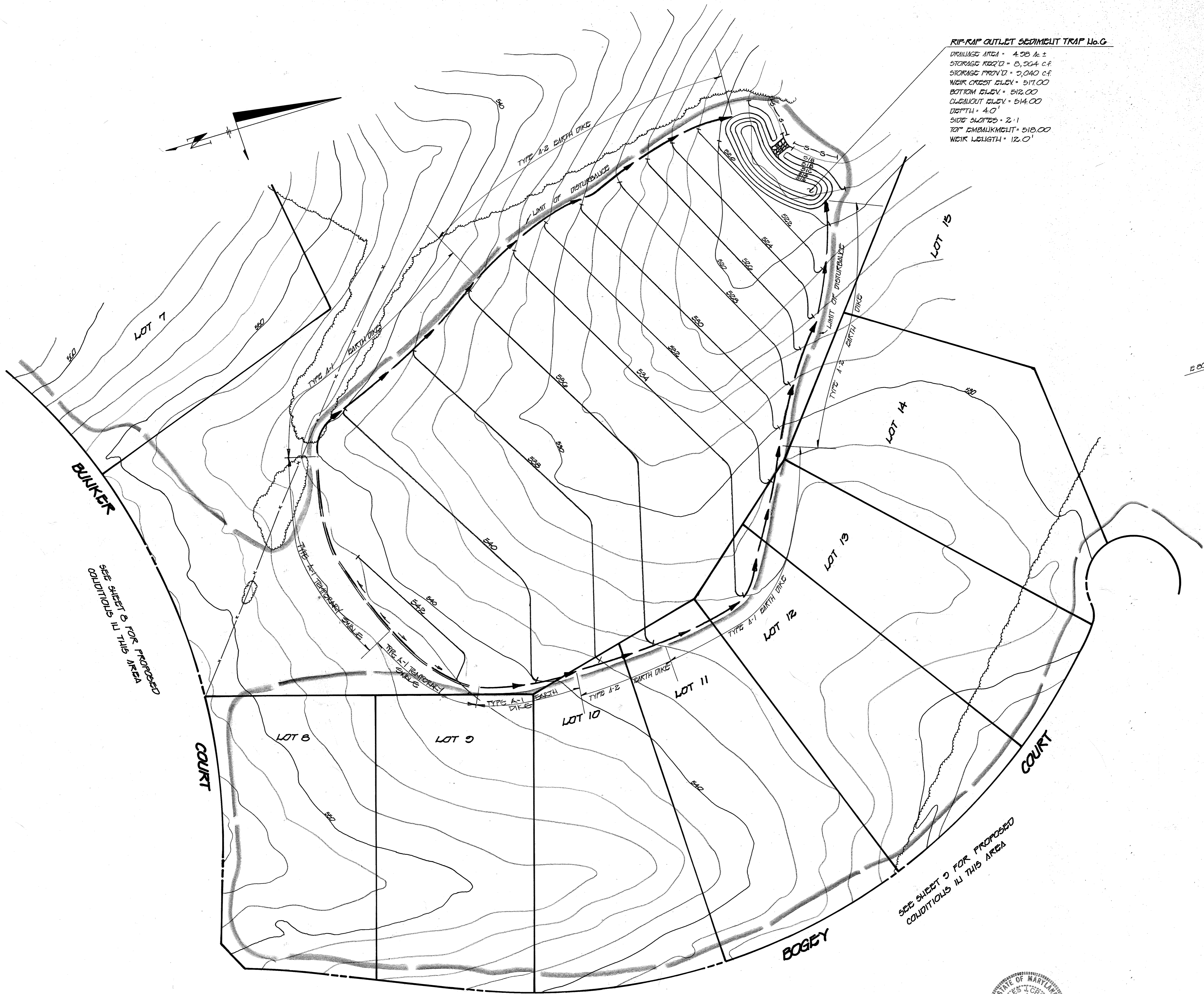
OWNER
 WEST FRIENDSHIP NEW TOWN COMPANY
 11900 TECH ROAD
 SILVER SPRING, MARYLAND 20904

DEVELOPER
 NEW TOWN COMPANY
 c/o LAND DESIGN & DEVELOPMENT, INC.
 10805 HICKORY RIDGE ROAD, SUITE 210
 COLUMBIA, MARYLAND 21044



CHARLES J. GROVO, SR. 3/1/94
 DATE

GRADING & SEDIMENT CONTROL PLAN
WEST FRIENDSHIP ESTATES
 SECTION 1
 LOTS 1 - 10 AND PARCEL 'A' & 'B'
 THIRD ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 NOV 10, 1993
 SCALE: AS SHOWN
 SHEET 12 OF 20



RIP-RAP OUTLET SEDIMENT TRAP No. G
 DRAINAGE AREA = 4.28 A_c ±
 STORAGE REQ'D = 3,204 C.F.
 STORAGE PROVIDED = 3,040 C.F.
 WEIR CREST ELEV. = 517.00
 BOTTOM ELEV. = 512.00
 CLEANOUT ELEV. = 514.00
 DEPTH = 4.0'
 SIDE SLOPES = 2:1
 TOP FINISH ELEV. = 518.00
 WEIR LENGTH = 12.0'

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 3/1/94

DEVELOPER'S CERTIFICATE
 I HAVE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 3/1/94

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 REVIEWER: *[Signature]* DATE: 4/10/94
 U.S. SOIL CONSERVATION DISTRICT

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: *[Signature]* DATE: 4/10/94
 DISTRICT HOWARD SOIL CONSERVATION DIST.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] DATE: 5/2/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] DATE: 4/27/94
 CHIEF, BUREAU OF ENGINEERING

APPROVED: COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] DATE: 4/27/94
 CHIEF, LAND DEVELOPMENT DIVISION

[Signature] DATE: 4-25-94
 CHIEF, BUREAU OF HIGHWAYS

SEE SHEET 6 FOR PROPOSED CONDITIONS IN THIS AREA

SEE SHEET 9 FOR PROPOSED CONDITIONS IN THIS AREA

Public Forest Conservation Easement Line Table		Public Forest Conservation Easement Line Table		Public Forest Conservation Easement Line Table	
Line	Bearing & Distance	Line	Bearing & Distance	Line	Bearing & Distance
L1	N85°00'00"E 35.00'	L20	S64°30'00"W 121.38'	L38	S43°48'00"W 160.00'
L2	S56°03'45"E 284.90'	L21	S61°30'00"W 89.96'	L39	S49°09'12"W 192.65'
L3	N86°00'00"E 36.00'	L22	S61°30'00"W 89.96'	L40	S68°49'50"W 80.56'
L4	S62°15'45"E 46.95'	L23	S37°00'00"W 80.00'	L41	N83°27'30"E 78.36'
L5	N43°06'50"E 119.79'	L24	S67°00'00"W 30.00'	L42	S50°20'45"E 31.15'
L6	N68°00'00"E 208.17'	L25	S03°00'00"E 20.00'	L43	N34°47'45"E 133.98'
L7	N00°40'30"E 192.93'	L26	N07°00'00"E 30.00'	L44	N59°08'00"E 74.66'
L8	S31°11'45"E 22.73'	L27	S17°20'00"E 65.00'	L45	N44°17'26"E 75.44'
L9	N89°13'00"E 81.86'	L28	S17°20'00"E 65.00'	L46	N62°48'25"E 72.20'
L10	S41°41'15"E 36.00'	L29	S65°43'30"W 30.27'	L47	N49°18'30"E 70.93'
L11	S66°59'50"E 18.14'	L30	N30°31'11"W 133.49'	L48	N17°31'20"E 56.25'
L12	S00°00'00"E 278.61'	L31	N79°04'00"W 145.61'	L49	N05°36'00"E 25.84'
L13	S63°43'30"W 65.03'	L32	N78°50'00"W 74.29'	L50	N43°46'11"E 6.00'
L14	N56°00'30"W 3.75'	L33	N79°30'13"W 71.71'	L51	N39°57'10"E 143.93'
L15	S33°20'00"W 6.55'	L34	S39°00'00"W 34.34'	L52	S97°30'00"E 113.70'
L16	S63°43'30"W 8.75'	L35	S01°17'00"E 151.25'	L53	N61°59'57"E 74.78'
L17	N56°00'30"W 453.48'	L36	N89°06'18"W 100.00'	L54	N66°08'10"E 60.64'
L18	S60°11'10"E 242.98'	L37	N10°00'00"E 180.00'	L55	S14°05'30"W 24.45'
L19	S04°48'44"W 118.03'	L38	N48°04'49"W 45.00'	L56	S05°28'49"W 75.87'

Legend

- Existing 10' Public Tree Maintenance Easement (Plat Nos. 11432 Thru 11443)
- Existing Public Stormwater Management, Drainage & Utility Easement (Plat Nos. 11432 Thru 11443)
- Existing 10' Reversible Slope Easement (Plat Nos. 11432 Thru 11443)
- Existing Limits Of Wetlands (Plat Nos. 11432 Thru 11443)
- Existing Public Forest Conservation Easement (Retention) (L. 3795, F. 09)
- Public Forest Conservation Easement (Retention)

SOILS LEGEND

SOIL	NAME	CLASS	'K' VALUE
B&A	B&A silt loam, 0 to 3 percent slopes	D	.49
GgA	Glenelg loam, 0 to 3 percent slopes	B	.37
GgB	Glenelg loam, 3 to 8 percent slopes	B	.37
GgC	Glenelg loam, 8 to 15 percent slopes	B	.43
LA&B	Legore silt loam, 3 to 8 percent slopes	B	.64
LAC	Legore silt loam, 8 to 15 percent slopes	B	.64
MAC	M&or loam, 8 to 15 percent slopes	B	.32

NOTES:

- THE FOREST CONSERVATION EASEMENT AREAS HAVE BEEN ESTABLISHED IN OPEN SPACE PARCEL 'B', WEST FRIENDSHIP ESTATES, SECTION 1 TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION ARE ALLOWED. THE FOREST CONSERVATION ACT REQUIREMENTS FOR CIVIL WOODS SECTION 4, AREA 1 (F-95-173) REQUIRED 8.13 ACRES FOREST RESOURCES. THIS OBLIGATION IS PROVIDED BY 1.64 ACRES IN OPEN SPACE PARCEL 'B', WEST FRIENDSHIP ESTATES, SECTION 1 AND ALSO 0.49 ACRES IN TREE BANK-ROSWAN PROPERTY, 50P-16-041.
- SEE SHEET NO. 18 - 20 FOR GRADING REVISIONS AND PLANTING AREA

FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS SUBJECT TO THE FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991

1" MINIMUM

FOREST CONSERVATION SIGN DETAIL

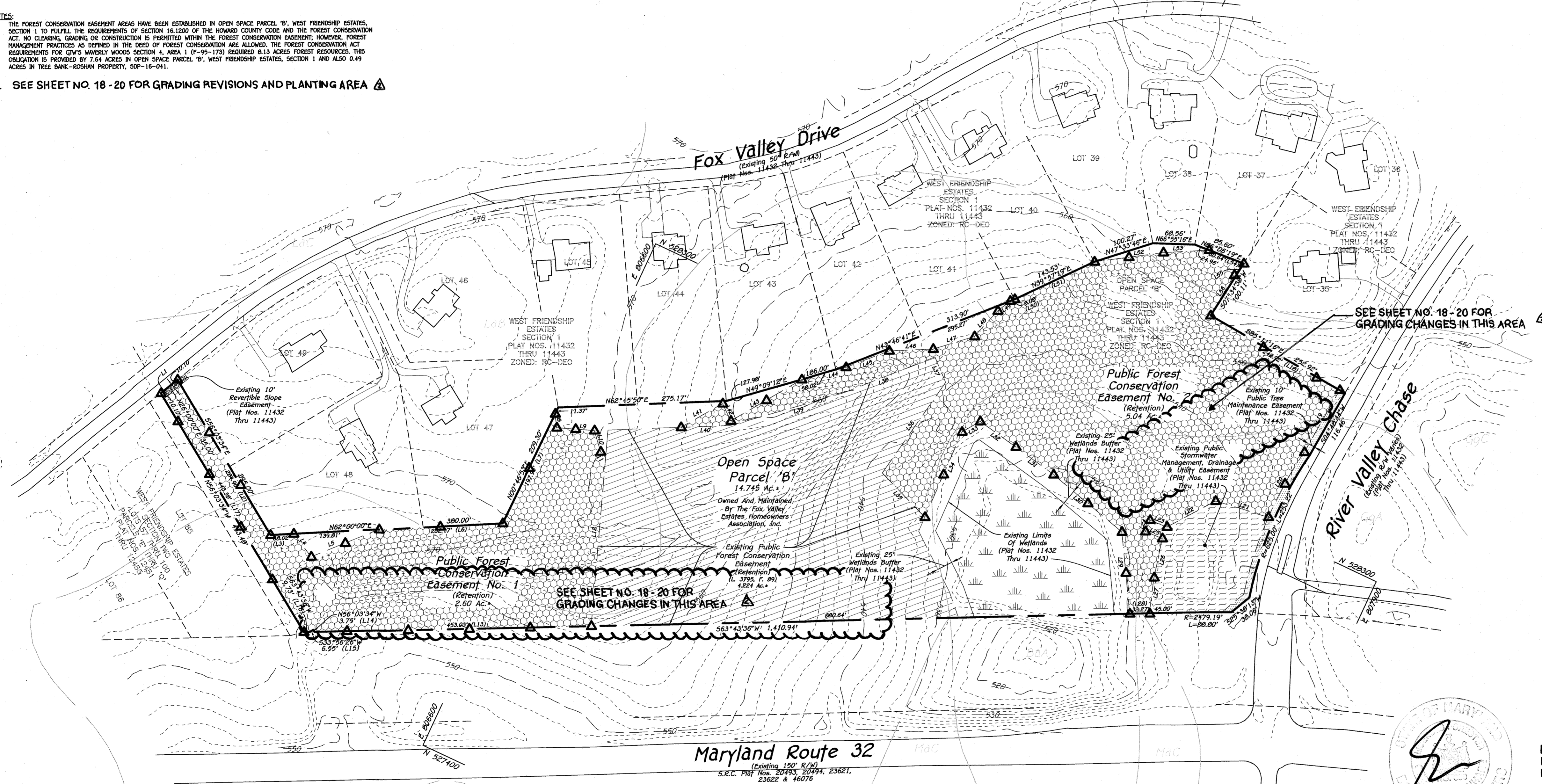
NOT TO SCALE

FOREST PROTECTION GENERAL NOTES

- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AS NECESSARY, AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
- REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
- ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

LEGEND

SYMBOL	DESCRIPTION
(Dashed line)	EXISTING CONTOUR 2' INTERVAL
(Dotted line)	EXISTING CONTOUR 10' INTERVAL
(Tree symbol)	EXISTING TREES
(Elevation symbol)	SPOT ELEVATION
(Slope symbol)	DENOTES 25% AND GREATER SLOPE
(Slope symbol)	DENOTES 15% - 24.9% SLOPES
(Hatched area)	PUBLIC FOREST CONSERVATION EASEMENT (RETENTION)
(Dotted area)	PUBLIC FOREST CONSERVATION EASEMENT (REFORESTATION)
(Triangle symbol)	FOREST CONSERVATION SIGN LOCATION



Maryland DNR Qualified Professional
 Name: Gregory O'Hare
 Expiration: 11/15/2023
 Address: RK&K, 700 East Pratt St., Suite 500, Baltimore, MD 21202
 Phone: (410) 462-9165
 gohare@rkk.com

Forest Conservation
West Friendship Estates
 Section 1
 Open Space Parcel 'B'
 (Being A Revision To Open Space Parcel 'B', As Shown On Plats Entitled "West Friendship Estates, Section 1, Lots 1-56, Parcels A, B, C And D" Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 11432 Thru 11443)

RESPONSIBILITY: ADDED REDLINE NO. 2 CROSS REFERENCE NOTES TO REFER TO NEW SHEETS THAT WERE DEVELOPED CONCEPTUALLY, NOT FOR CONSTRUCTION.

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Chief, Development Engineering Division

8/5/21
 8/4/21

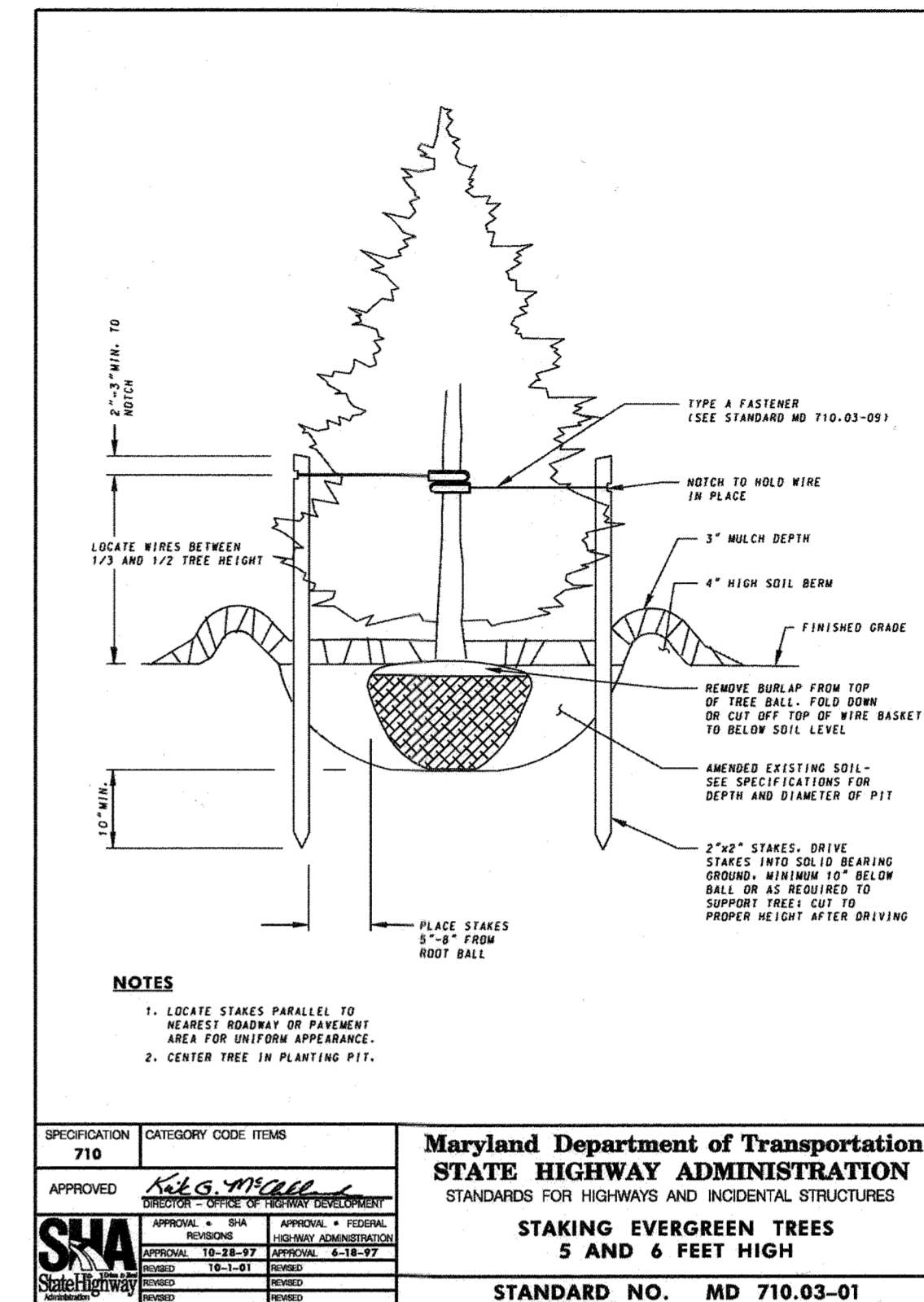
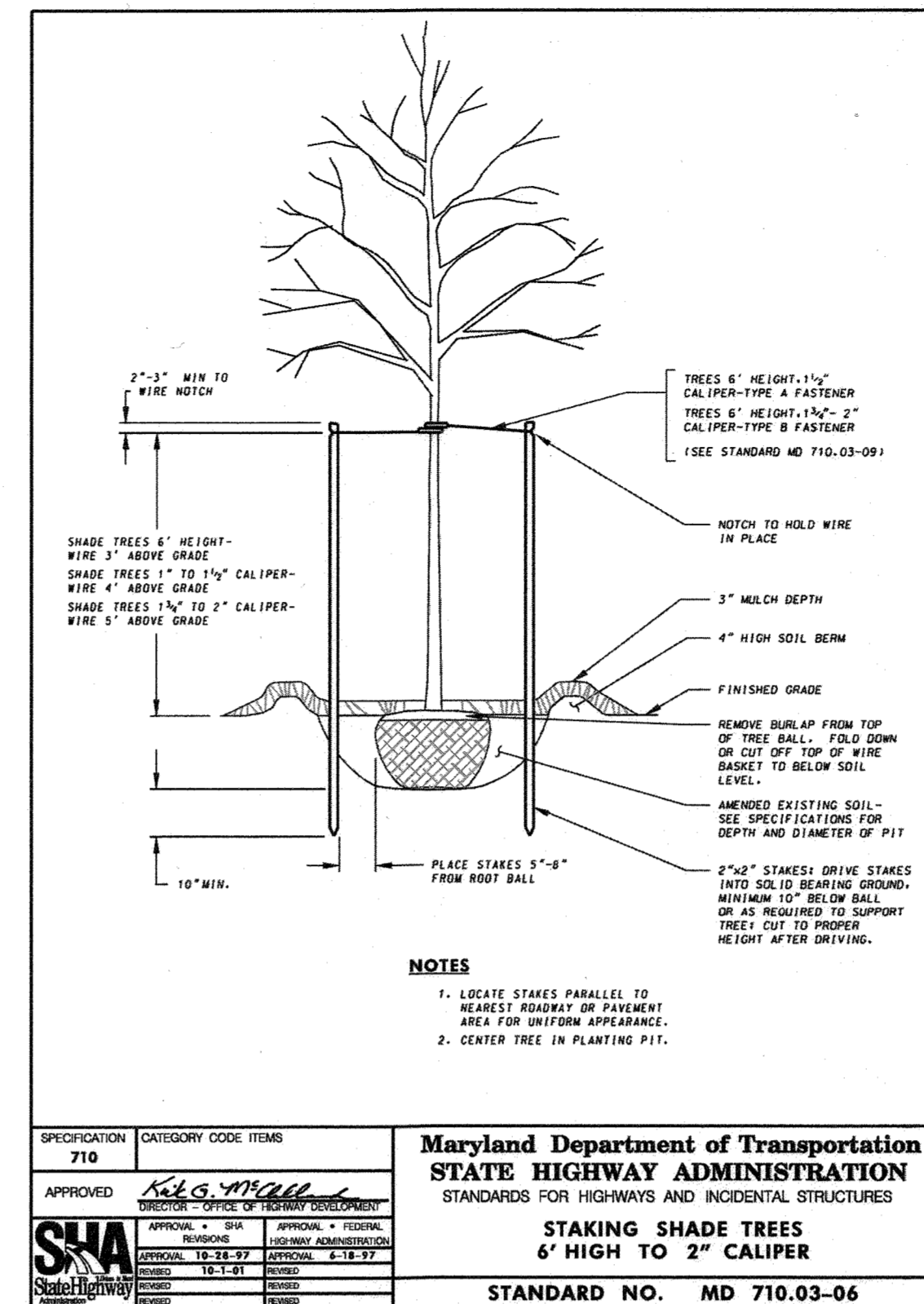
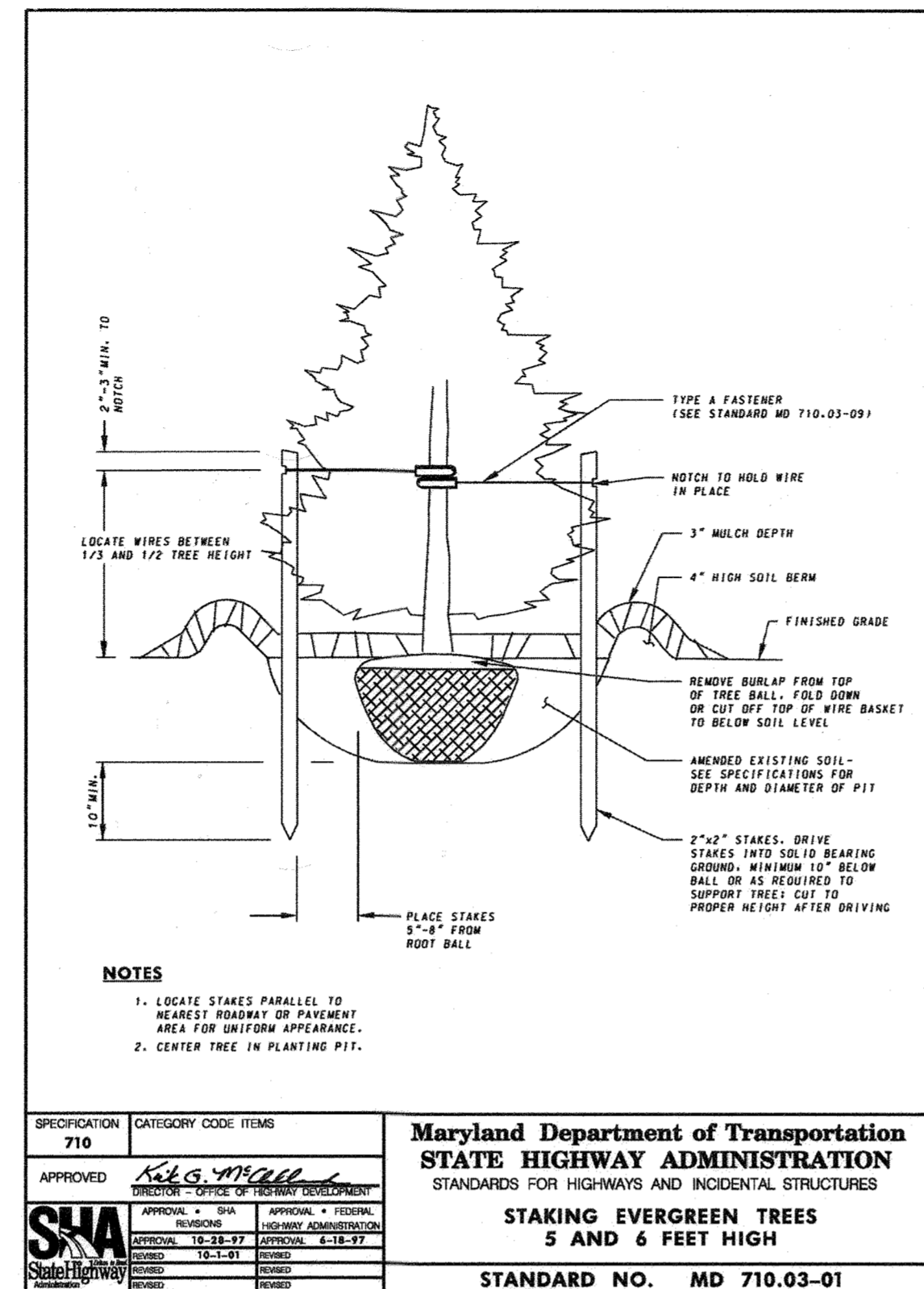
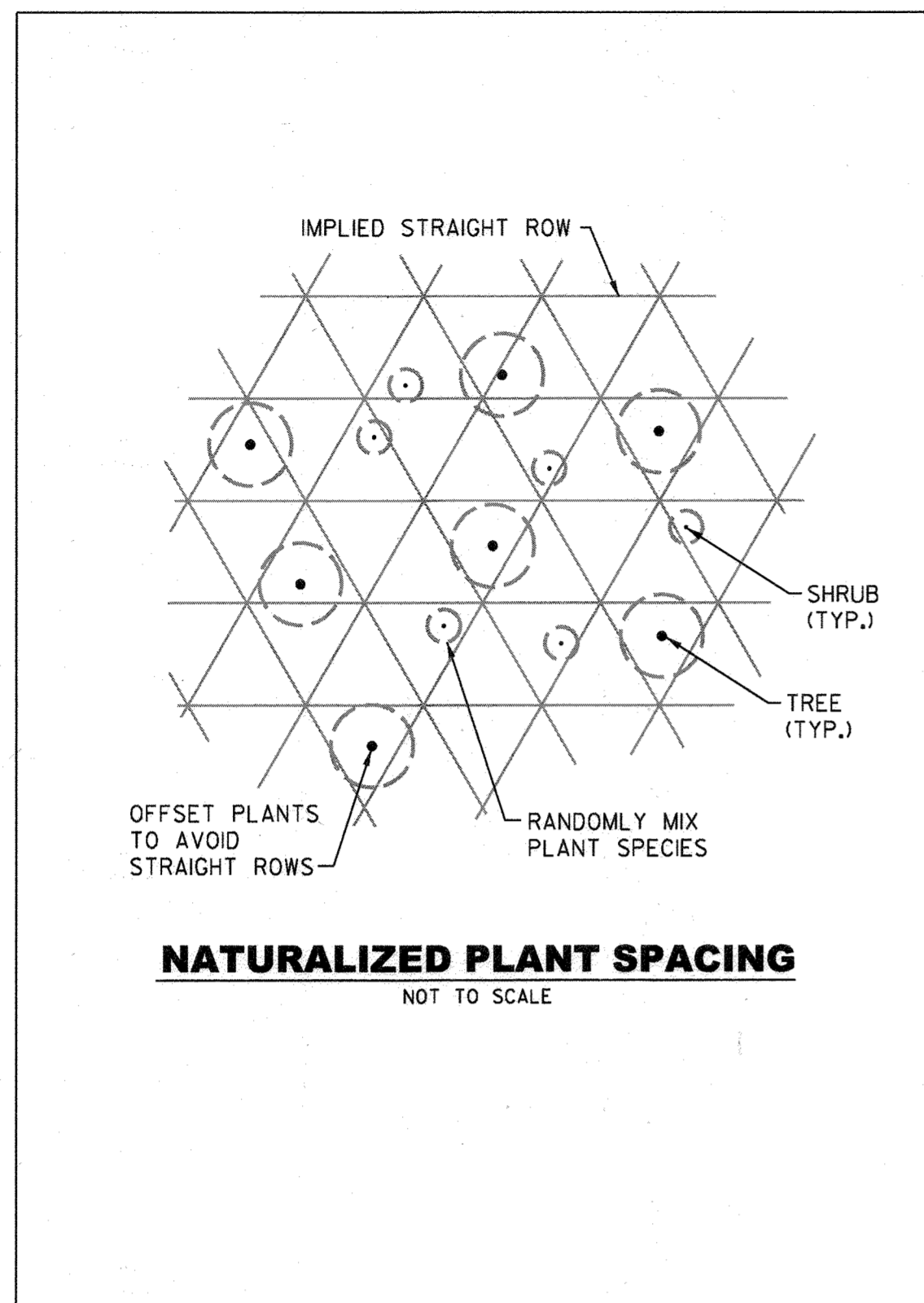
No.	Description	Date
ADDED SHEETS #18, #19, #20 - NEW BERMS		11/29/21
ADDED SHEET #17 FOREST CONSERVATION PLAN		12/18/20

Terrell A. Fisher, Professional Land Surveyor No. 10692 State
 Expiration Date: December 13, 2021

Developer
 Waverly Woods Development Corporation
 11451 Triadelphia Road
 Glenelg, Maryland 21737
 Ph# 410-442-2337

Owners
 Fox Valley Estates Homeowners Association, Inc.
 c/o Richard Gezelle, Jr.
 3600 Crowsbill Lane-Suite 103
 Owings Mills, Maryland 21117
 Ph# 202-378-8270

Zoned: RC-DEO
 Tax Map: 15, Grid: 16; Parcel: P/O 42
 Third Election District - Howard County, Maryland
 Date: July 6, 2021 Scale: 1"=100' Sheet 17 of 20



REFORESTATION PLAN

A. Planting Plan and Methods

Plant species selection was based on proposed tree communities to be planted in the adjacent right-of-way during the MD 32 Widening project. Reforestation will be accomplished by planting a mix of #5 gallon and 1\"/>

B. Planting and Soil Specifications

Plant material will be installed in accordance with the current MDOT SHA Section 710 - Tree, Shrub and Perennial Installation and Establishment, and with MDOT SHA's standard planting details. Soil will be amended as necessary in accordance with the MDOT SHA Section 701 - Subsoil and Topsoil.

C. Maintenance of Plantings

For information regarding maintenance of reforestation plantings, see Post Construction Management Plans.

D. Guarantee Requirements

A 90% survival rate is required at the end of the first growing season and 75% at the end of the second and third growing seasons. After each growing season, replacement plantings will be installed to bring the total number of trees to 90% (first growing season) or 75% (second and third growing seasons) of the original total. Replacement plantings will be installed prior to the start of the next growing season.

E. Security for Reforestation

Section 16-1209 of the Howard County Forest Conservation Act requires that a developer shall post a security (bond, letter of credit, etc.) with the County to ensure that all work is done in accordance with the FCP.

CONSTRUCTION PERIOD PROTECTION PROGRAM

A. Forest Protection Techniques

Temporary fencing shall be placed along the entire LOD within the existing Forest Conservation Easement to protect existing forest. Permanent signage exists on site and will be maintained. Permanent signs within the LOD will be temporarily removed and reset at the conclusion of construction.

B. Pre-Construction Meeting

Upon staking of limits of disturbance, a pre-construction meeting will be held between MDOT SHA, the contractor, and appropriate County inspector. The purpose of the meeting will be to verify that all sediment controls in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

C. Storage Facilities/Equipment Cleaning

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to the limit of disturbance. Cleaning of equipment will be limited to the limit of disturbance. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into environmentally sensitive areas.

D. Sequence of Construction

1. Stake out limits of disturbance and install all temporary protection fence and sediment control devices. Remove and store existing signage from within the LOD.
2. Hold pre-construction meeting between MDOT SHA, the contractor, and the County inspector.
3. Perform clearing and grubbing.
4. Perform grading.
5. Stabilize all disturbed areas.
6. Install plantings.
7. Remove sediment control.
8. Hold post-construction meeting with County inspectors to ensure compliance with FCP. Submit Certification of Installation.
9. Monitor and maintain plantings for 3 years.

E. Construction Monitoring

A qualified professional designated by MDOT SHA will monitor construction of the project to ensure that all activities comply with the Forest Conservation Plan.

F. Post-Construction Meeting

Upon completion of construction, a qualified professional designated by MDOT SHA will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that plantings have been installed.

POST-CONSTRUCTION MANAGEMENT PLAN

Howard county requires a 3-year post-construction management plan be prepared as part of the forest conservation plan. The plan goes into effect upon acceptance of the construction certification of completion by the County. A qualified professional designated by MDOT SHA will be responsible for implementation of the post-construction management plan. The following items will be incorporated into the plan:

A. Fencing and Signage

Permanent signage indicating the limits of the retention/reforestation area shall be maintained.

B. General Site Inspections/Maintenance of Plantings

Site inspections will be performed a minimum of three times during the growing season. The purpose of the inspections will be to assess the health of the afforestation plantings. Appropriate measures will be taken to rectify any problems which may arise.

C. In addition, maintenance of the plantings will involve the following steps:

1. Watering * All plant material shall be watered twice a month during the 1st growing season, more or less frequently depending on weather conditions. During the second growing season, once a month during May-September, if needed.
2. Removal of invasive exotics and noxious weeds. Old field successional species will be retained.
3. Identification of serious plant pests and diseases, treatment with appropriate agent.
4. Pruning of dead branches.
5. After inspections, replacement of plants, if required, in accordance with the Guarantee Requirements shown on the FCP.

D. Education

No additional education will be provided to adjacent property owners, as such work was conducted at the initial establishment of the forest conservation area.

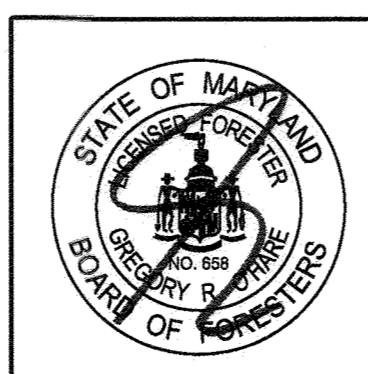
E. Final Inspection

At the end of the 3-year post-construction management period, a qualified professional will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/afforestation requirements have been met. Upon acceptance of this certification, the County will release the developer from all future obligations and release the developer's bond.

Approved: Department Of Public Works
 Chief, Bureau of Highways MK 02/22/22 Date

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development MK 2/28/22 Date
 Chief, Development Engineering Division PPD 2-28-22 Date

ADDED SHEETS #18, #19, #20 - NEW BERMS	11/29/21
NO. DESCRIPTION	DATE
REVISION BLOCK	



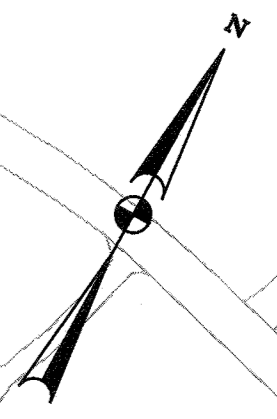
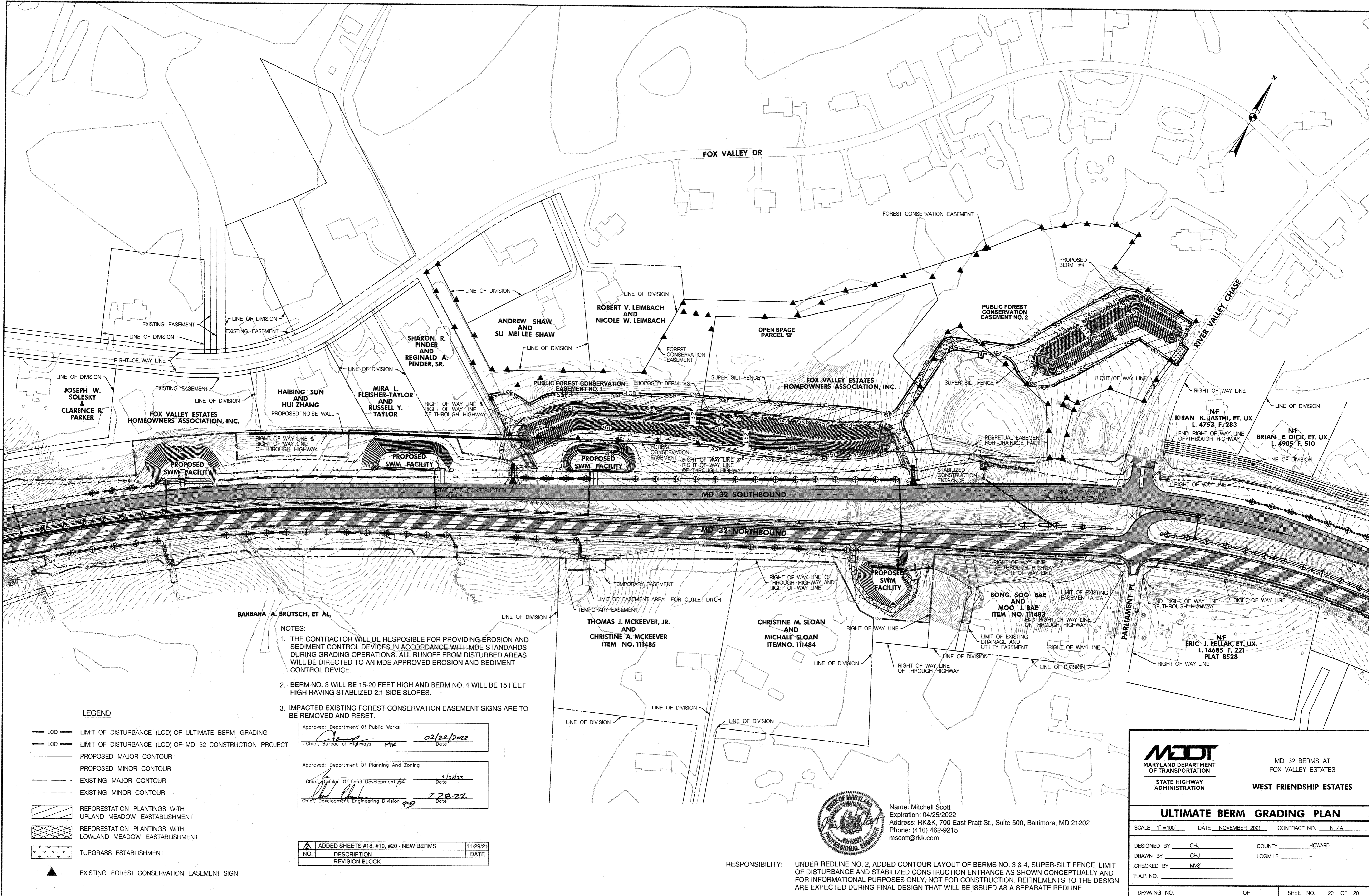
Maryland DNR Qualified Professional
 Name: Gregory O'Hare
 Expiration: 11/15/2023
 Address: 700 East Pratt St., Suite 500, Balt. MD 21202
 Phone: 410-462-9165
 gohare@rkk.com



MD 32 BERMS AT
 FOX VALLEY ESTATES
 WEST FRIENDSHIP ESTATES

FOREST CONSERVATION NOTES AND DETAILS

SCALE	N.T.S.	DATE	NOVEMBER 2021	CONTRACT NO.	N/A
DESIGNED BY	NLB	COUNTY	HOWARD		
DRAWN BY	CHJ	LOGMILE			
CHECKED BY	GRO				
F.A.P. NO.					
DRAWING NO.	OF	SHEET NO.	19	OF	20



- NOTES:**
1. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING EROSION AND SEDIMENT CONTROL DEVICES IN ACCORDANCE WITH MDE STANDARDS DURING GRADING OPERATIONS. ALL RUNOFF FROM DISTURBED AREAS WILL BE DIRECTED TO AN MDE APPROVED EROSION AND SEDIMENT CONTROL DEVICE.
 2. BERM NO. 3 WILL BE 15-20 FEET HIGH AND BERM NO. 4 WILL BE 15 FEET HIGH HAVING STABILIZED 2:1 SIDE SLOPES.
 3. IMPACTED EXISTING FOREST CONSERVATION EASEMENT SIGNS ARE TO BE REMOVED AND RESET.

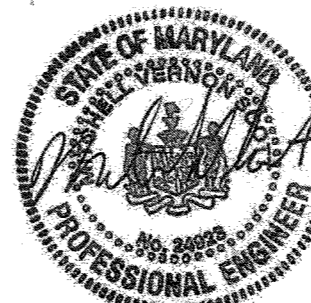
LEGEND

- LOD — LIMIT OF DISTURBANCE (LOD) OF ULTIMATE BERM GRADING
- LOD — LIMIT OF DISTURBANCE (LOD) OF MD 32 CONSTRUCTION PROJECT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- ▨ REFORESTATION PLANTINGS WITH UPLAND MEADOW ESTABLISHMENT
- ▩ REFORESTATION PLANTINGS WITH LOWLAND MEADOW ESTABLISHMENT
- ▧ TURGRASS ESTABLISHMENT
- ▲ EXISTING FOREST CONSERVATION EASEMENT SIGN

Approved: Department Of Public Works
 Chief, Bureau of Highways *MK* 02/22/2022
 Date

Approved: Department Of Planning And Zoning
 Chief, Division of Land Development *pt* 2/22/22
 Chief, Development Engineering Division *ms* 2/28/22
 Date

NO.	DESCRIPTION	DATE
▲	ADDED SHEETS #18, #19, #20 - NEW BERMS	11/29/21
	REVISION BLOCK	



Name: Mitchell Scott
 Expiration: 04/25/2022
 Address: RK&K, 700 East Pratt St., Suite 500, Baltimore, MD 21202
 Phone: (410) 462-9215
 mscott@rkk.com

RESPONSIBILITY: UNDER REDLINE NO. 2, ADDED CONTOUR LAYOUT OF BERMS NO. 3 & 4, SUPER-SILT FENCE, LIMIT OF DISTURBANCE AND STABILIZED CONSTRUCTION ENTRANCE AS SHOWN CONCEPTUALLY AND FOR INFORMATIONAL PURPOSES ONLY. NOT FOR CONSTRUCTION. REFINEMENTS TO THE DESIGN ARE EXPECTED DURING FINAL DESIGN THAT WILL BE ISSUED AS A SEPARATE REDLINE.

MDOT
 MARYLAND DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION

MD 32 BERMS AT FOX VALLEY ESTATES
 WEST FRIENDSHIP ESTATES

ULTIMATE BERM GRADING PLAN

SCALE: 1" = 100' DATE: NOVEMBER 2021 CONTRACT NO.: N/A

DESIGNED BY: CHJ COUNTY: HOWARD
 DRAWN BY: CHJ LOGMILE:
 CHECKED BY: MVS
 F.A.P. NO.:

DRAWING NO. OF SHEET NO. 20 OF 20