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FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLAN

ARCHERS GLEN

LOTS 6 THRU 22 AND PRESERVATION PARCELS 'A' THRU 'C'

ZONED: RC-DEO

TAX MAP NO. 9 GRID NO. 22 PARCEL NO. 301

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Harriet 9/18/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
William J. Walsh 8/21/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. Walsh 8-21-03
 CHIEF, BUREAU OF HIGHWAYS

GENERAL NOTES

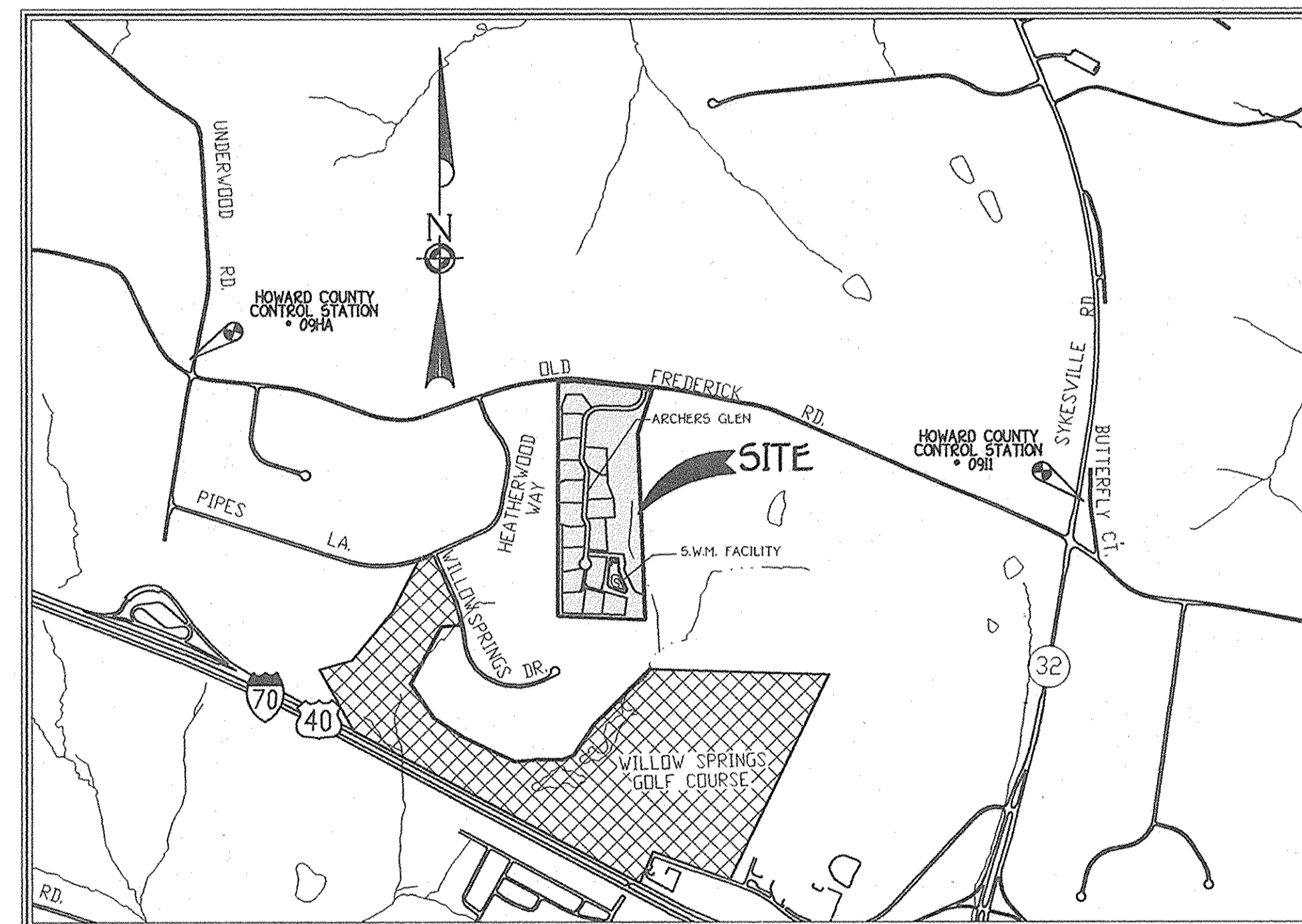
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1890 AT LEAST 15 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 BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- COORDINATES BASED ON NAD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 0911 AND NO. 0904.
 ✓ NO. 0911 N 602,283.337 ELEV. = 653.27
 E 1,328,214.34
 ✓ NO. 0904 N 604,263.481 ELEV. = 604.43
 E 1,318,531.057
- THE TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP DATED MAY 22, 2001 AND APPROVED UNDER 501-19.
- BACKGROUND INFORMATION:
 A. SUBDIVISION NAME: ARCHERS GLEN
 B. TAX MAP NO.: 9
 C. PARCEL NO.: 301
 D. ZONING: RC-DEO
 E. ELECTION DISTRICT: THIRD
 F. TOTAL TRACT AREA: 40.00 AC.
 G. NO. OF BUILDABLE LOTS: 17
 H. NO. OF OPEN SPACE LOTS: 0
 I. NO. OF NON-BUILDABLE PARCELS: 2
 J. NO. OF BUILDABLE PARCELS: 1
 K. AREA OF BUILDABLE LOTS: 17.54 AC.
 L. AREA OF OPEN SPACE LOTS: 0.00 AC.
 M. AREA OF NON-BUILDABLE PARCELS: 7.504 AC.
 N. AREA OF BUILDABLE PARCELS: 12.503 AC.
 O. TOTAL AREA OF ROADWAY TO BE GRADATED: 2.289 AC.
 P. PREVIOUS FILE NOS.: 501-19 APPROVAL DATE: 5/22/01 P. 02-05 APPROVAL DATE: 9/18/02
- NO CEMETERIES EXIST ON THE PROPERTY.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
- THE FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 161200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- STORMWATER MANAGEMENT FACILITY:
 TYPE - MICRO-POOL DESIGN (EXTENDED DETENTION)
 OWNER - HOMEOWNERS ASSOCIATION
 CREDITS AREAS FOR SWM COMPUTATIONS: NATURAL AREA
 CONSERVATION CREDIT FOR DRAINAGE AREA "A": THERE WAS NO CHANGE IN RCN OR Q VALUES. THE ONLY BENEFIT GAINED BY THIS CREDIT WAS A REDUCTION IN WQV. IN ADDITION, A GRASS CHANNEL CREDIT IS UTILIZED THAT PROVIDES THE REQUIRED RECHARGE VOLUME FOR THIS SITE.
- THE PROPOSED WATER AND SEWER SYSTEMS SHALL BE PRIVATE.
- THE SUBJECT PROPERTY IS LOCATED OUTSIDE OF THE METROPOLITAN DISTRICT.
- TOPOGRAPHIC INFORMATION ESTABLISHED AT TWO FOOT INTERVALS BASED ON AERIAL TOPOGRAPHY PREPARED BY HARFORD AERIAL SURVEYS DATED JUNE 9, 2000 AND SUPPLEMENTED BY HOWARD COUNTY AERIAL CONTOUR MAPS AND FIELD RUN TOPOGRAPHY PREPARED BY FISHER, COLLINS & CARTER, INC. DATED AUGUST 28, 2001.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY AND NOT ONTO THE FLAG OR PIPESTEM DRIVEWAY.
- WETLAND AND FOREST STAND DELINEATION INFORMATION SHOWN WAS TAKEN FROM REPORTS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED SEPTEMBER 18, 2000 AND APPROVED UNDER 5 01-19.
- SOILS INFORMATION TAKEN FROM SOIL MAP NO. B, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY 1968 ISSUE.
- AS A CONSEQUENCE OF ITS SUBMISSION FOR COUNTY REVIEW PRIOR TO NOVEMBER 15, 2001 THIS PLAN IS SUBJECT TO THE 4th EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. IN ADDITION, BECAUSE IT DID NOT HAVE PRELIMINARY PLAN APPROVAL PRIOR TO NOVEMBER 1, 2001, IT IS SUBJECT TO COMPLIANCE WITH COUNTY COUNCIL BILL 50-2001, WHICH AMENDS PORTIONS OF THE ZONING REGULATIONS.
- SUBJECT PROPERTY ZONED RC-DEO PER 10/18/93 COMPREHENSIVE ZONING PLAN.
- THERE ARE STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY "SLOPES THAT AVERAGE 25% OR GREATER OVER 10 VERTICAL FEET". PER SECTION 161000(b) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, TOTAL AREA OF 25% OR GREATER SLOPES = 0.04 AC.
- AS PER SECTION 104.f.4.b OF THE ZONING REGULATIONS, ONLY ONE EASEMENT HOLDER IS REQUIRED FOR PRESERVATION PARCELS DESIGNATED SOLELY FOR SWM FACILITIES OR COMMUNITY SEWERAGE DISPOSAL SYSTEMS.
 A. NON-BUILDABLE PRESERVATION PARCEL "A"
 OWNED: PRIVATE HOMEOWNER
 EASEMENT HOLDERS: HOWARD COUNTY, MARYLAND & HOMEOWNERS ASSOCIATION
 B. NON-BUILDABLE PRESERVATION PARCEL "C"
 OWNED: HOMEOWNERS ASSOCIATION
 EASEMENT HOLDER: HOWARD COUNTY, MARYLAND
 C. BUILDABLE PRESERVATION PARCEL "B"
 OWNED: PRIVATE HOMEOWNER
 EASEMENT HOLDERS: HOWARD COUNTY, HOMEOWNERS ASSOCIATION
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAM OR THEIR REQUIRED BUFFERS.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 161200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY PROVIDING 4.5 ACRES +/- OF ONSITE AFFORESTATION @ \$0.50/SF FOR 165,528 SF. = \$98,000.00 AND 6.8 ACRES 12.9 AC. NET CREDIT AREA OF ONSITE FOREST RETENTION @ \$0.20/SF FOR 256,200 SF. = \$51,240.00. THE REMAINING REQUIRED FOREST CONSERVATION REQUIREMENT WILL BE PROVIDED BY 1.0 AC. OF FEE-IN-LIEU @ \$0.50/SF FOR 43,840 SF. = \$21,920.00. THE FORESTED FLOODPLAIN AREA OF 2.9 AC. IS NON-CREDITED F.C.E. AND DOES NOT REQUIRE SURETY. TOTAL FOREST CONSERVATION EASEMENT AREA = 15.20 ACRES FOR A TOTAL FOREST SURETY OF \$176,058.00.
- THE LANDSCAPE SURETY IN THE AMOUNT \$21,120.00 FOR PERIMETER LANDSCAPE REQUIREMENTS OF SECTION 16124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL IS POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION.
- A NOISE STUDY IS NOT REQUIRED AS THIS PLAN OF SUBDIVISION DOES NOT MEET ANY OF THE CRITERIA UNDER VOLUME III, SECTION 5.2.91-6 (PAGE 5-12).
- THERE IS AN EXISTING FOUNDATION LOCATED ON LOT 13. THIS FOUNDATION IS LEVEL WITH THE GROUND AND WILL BE FILLED WITH EARTH IN CONJUNCTION WITH THE ROADWAY CONSTRUCTION.

ROAD CLASSIFICATION CHART			
ROAD NAME	CLASSIFICATION	DESIGN SPEED	R/W WIDTH
ARCHERS GLEN	PUBLIC ACCESS PLACE	35 M.P.H.	40'

TRAFFIC CONTROL SIGNS				
STREET NAME	C.L. STATION	OFFSET	POSTED SIGN	SIGN CODE
ARCHERS GLEN	0+39	11'L	STOP	R1-1 ✓
ARCHERS GLEN	1+50	11'R	25 MPH SPEED LIMIT	R2-1 ✓
ARCHERS GLEN	2+75	11'L	STOP AHEAD	W3-1a ✓
ARCHERS GLEN	4+30	11'R	20 MPH SPEED LIMIT	W 13-1 ✓
ARCHERS GLEN	9+65	11'R	20 MPH SPEED LIMIT	W 13-1 ✓
ARCHERS GLEN	10+14	11'L	20 MPH SPEED LIMIT	W 13-1 ✓
ARCHERS GLEN	14+20	11'L	20 MPH SPEED LIMIT	W 13-1 ✓
ARCHERS GLEN	15+20	11'R	15 MPH SPEED LIMIT	W 13-1 ✓

STREET LIGHT CHART			
STREET NAME	C.L. STATION	OFFSET	TYPE
ARCHERS GLEN	6+45	22' L	250-WATT "SAG" MOUNTED ON A 30-FOOT BRONZE POLE W/ A 12-FOOT ARM

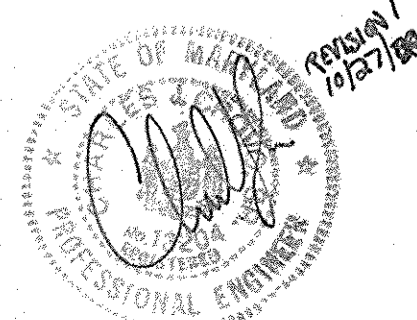
REVISION		
NO.	DESCRIPTION	DATE
1	REVISE FCE SURETY AMOUNT FOR FEE-IN-LIEU \$HT. NO	10-27-03



VICINITY MAP
SCALE: 1" = 1200'

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 GAITHERSBURG NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2854



OWNER
 ARNOLD M. SEWELL
 13000 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784

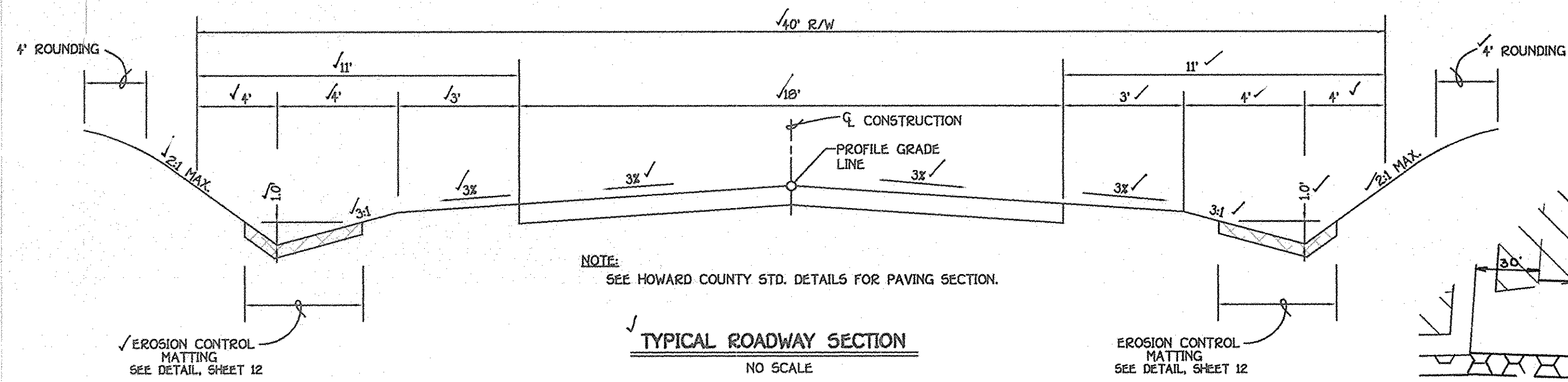
DEVELOPER
 VIKING DEVELOPMENT CORPORATION
 5890 OLD WASHINGTON ROAD
 SYKESVILLE, MARYLAND 21784

Charles J. Grovo
 CHARLES J. GROVO SR., P.E.
 8/18/03
 DATE

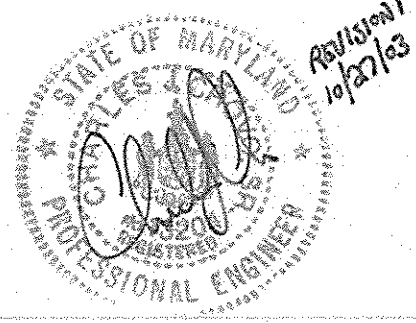


TITLE SHEET
 ARCHERS GLEN
 LOTS 6 THRU 22 AND
 PRESERVATION PARCELS 'A' THRU 'C'
 ZONED: RC-DEO
 TAX MAP NO. 9, PARCEL NO. 301, GRID NO. 22
 THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 DATE: JUNE 5, 2003
 SHEET 1 OF 18

AS-BUILT 9-24-06 F-09-70



ROADWAY INFORMATION CHART					
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION
ARCHERS GLEN	PUBLIC ACCESS PLACE	35 M.P.H.	RC-DEO	0+00 TO 21+42.01	P-2

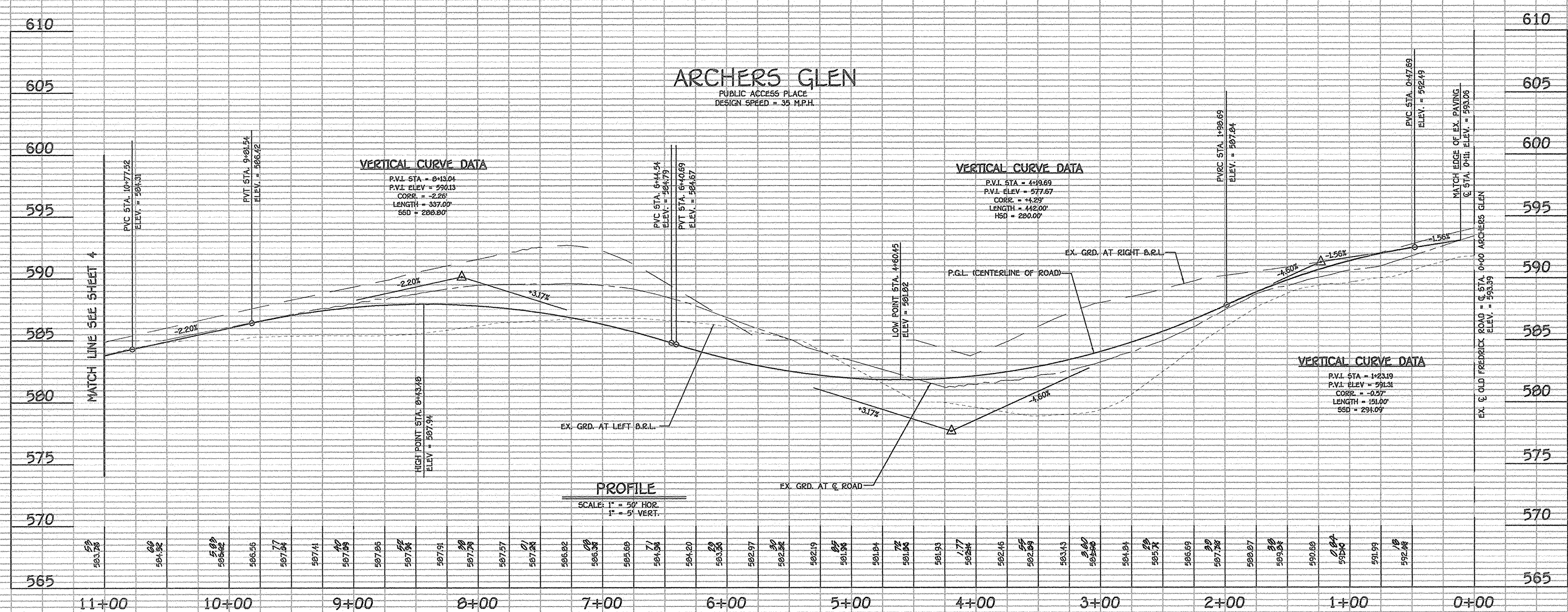
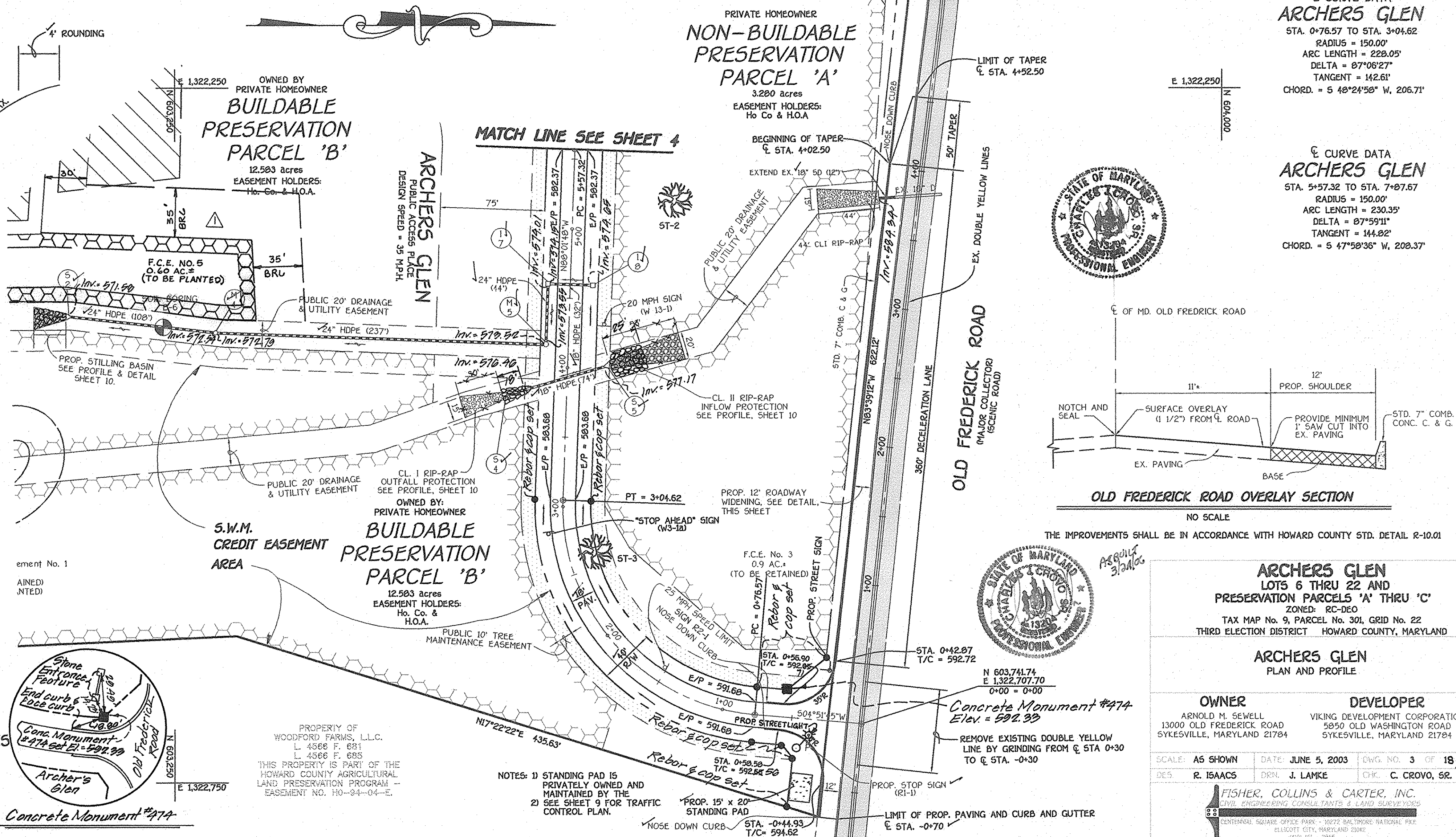
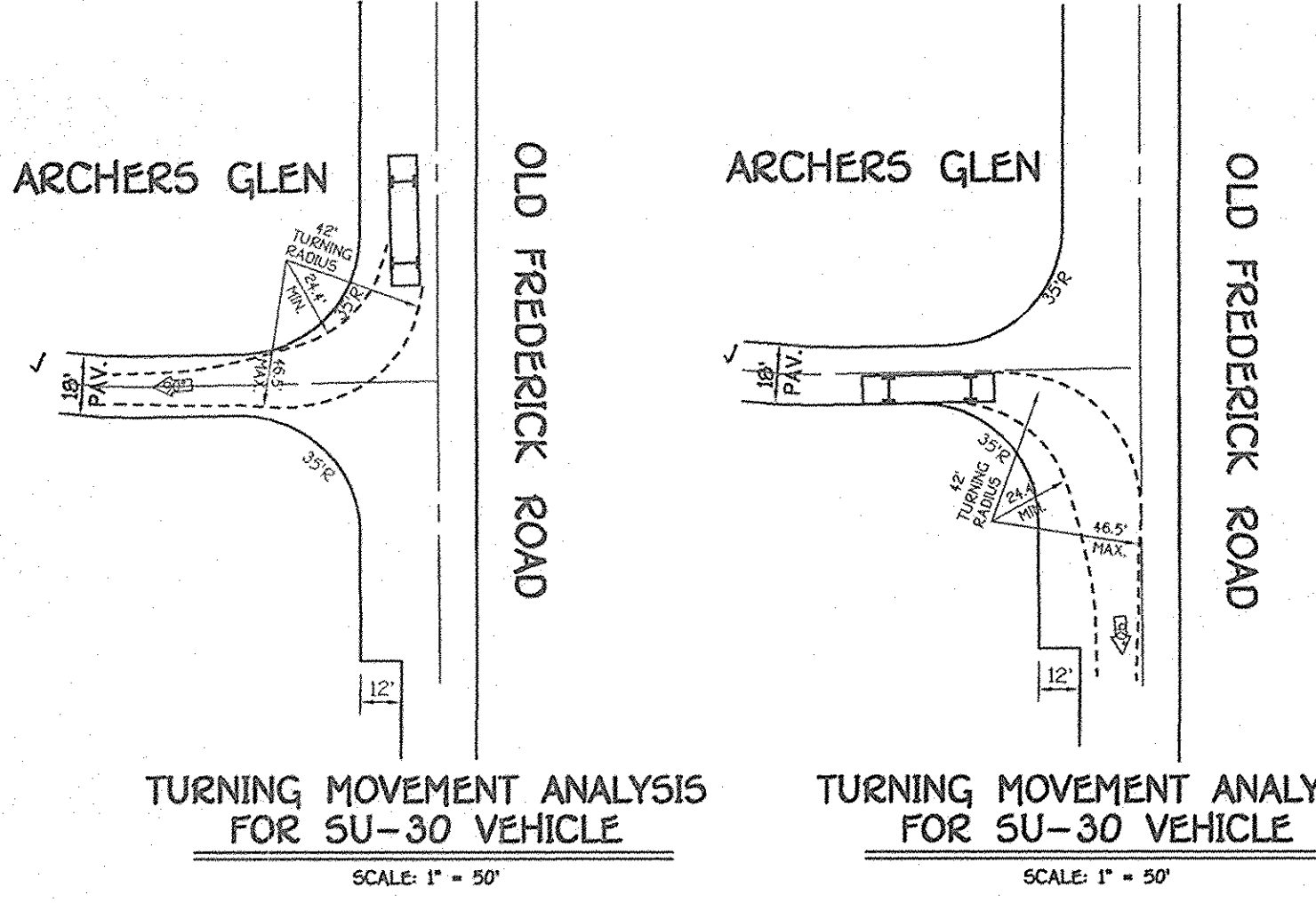


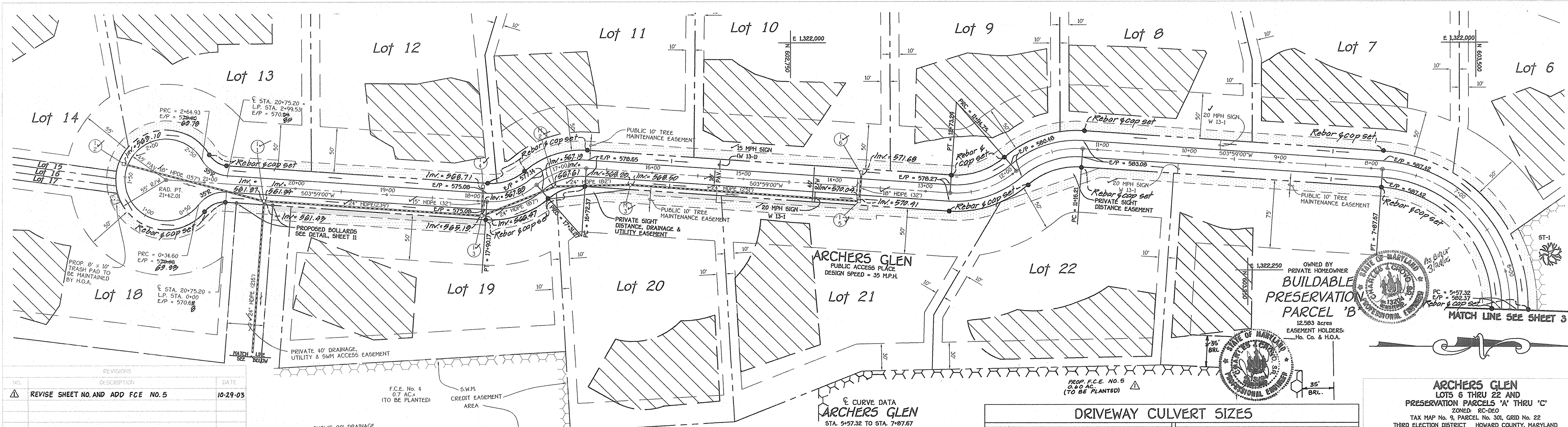
NO.	DESCRIPTION	DATE
1	ADD F.C.E. NO. 5, REVISE SHEET NUMBERS & B.R.L. ON PAR. B	10-27-03

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton 9/15/03
 CHIEF, DIVISION OF LAND DEVELOPMENT

William J. White 9-3-03
 CHIEF, BUREAU OF HIGHWAYS





REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE SHEET NO. AND ADD FCE NO. 5	10-29-03

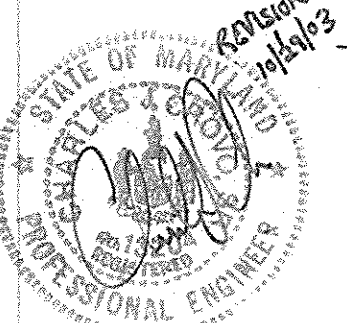
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Hamrick 9/29/03
CHIEF, DIVISION OF LAND DEVELOPMENT

Chris Dorman 9/30/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William R. Mahler 9-3-03
CHIEF, BUREAU OF HIGHWAYS



ARCHERS GLEN
PUBLIC ACCESS PLACE
DESIGN SPEED = 35 MPH

STATIONING: STA. 5+57.32 TO STA. 7+07.67
RADIUS = 150.00'
ARC LENGTH = 230.35'
DELTA = 87°59'11"
TANGENT = 144.82'
CHORD = 5 47°58'38" W, 208.37'

ARCHERS GLEN
STATIONING: STA. 17+31.27 TO STA. 17+90.17
RADIUS = 75.00'
ARC LENGTH = 58.90'
DELTA = 44°59'57"
TANGENT = 31.07'
CHORD = 5 18°30'58" E, 57.40'

ARCHERS GLEN
STATIONING: STA. 16+72.37 TO STA. 17+31.27
RADIUS = 75.00'
ARC LENGTH = 58.90'
DELTA = 44°59'57"
TANGENT = 31.07'
CHORD = 5 18°30'58" E, 57.40'

ARCHERS GLEN
STATIONING: STA. 11+94.75 TO STA. 12+73.29
RADIUS = 100.00'
ARC LENGTH = 78.54'
DELTA = 44°59'57"
TANGENT = 41.42'
CHORD = 5 18°30'58" E, 76.54'

ARCHERS GLEN
STATIONING: STA. 11+16.21 TO STA. 11+94.75
RADIUS = 100.00'
ARC LENGTH = 78.54'
DELTA = 44°59'57"
TANGENT = 41.42'
CHORD = 5 18°30'58" E, 76.54'

LOT NO.	PIPE SIZE	ROAD STA. & GRADE	REMARKS	LOT NO.	PIPE SIZE	ROAD STA. & GRADE	REMARKS
6	15"	7+25 @ 2.00%	Q10= 4.95 C.F.S.	16	18"	LP 1+46 @ 1.05%	Q10= 5.29 C.F.S. ALL ACCESSED FROM SAME DRIVEWAY
7	12"	7+67 @ 2.50%	Q10= 2.20 C.F.S.	17	18"	LP 1+46 @ 1.05%	Q10= 5.29 C.F.S. ALL ACCESSED FROM SAME DRIVEWAY
8	18"	9+60 @ 2.00%	Q10= 5.10 C.F.S.	18	15"	LP 0+70 @ 2.00%	Q10= 4.09 C.F.S.
9	24"	13+26 @ 1.00%	Q10= 10.70 C.F.S.	19	12"	10+20 @ 3.40%	Q10= 0.40 C.F.S.
10	15"	15+54 @ 1.00%	Q10= 3.41 C.F.S.	20	12"	16+12 @ 0.77%	Q10= 0.46 C.F.S.
11	15"	16+22 @ 0.77%	Q10= 3.05 C.F.S.	21	12"	13+02 @ 1.10%	Q10= 1.95 C.F.S.
12	15"	19+38 @ 1.00%	Q10= 3.66 C.F.S.	22	12"	10+43 @ 2.20%	Q10= 1.93 C.F.S.
13	18"	20+11 @ 1.00%	Q10= 4.29 C.F.S.	15	18"	LP 1+46 @ 1.05%	Q10= 5.29 C.F.S. ALL ACCESSED FROM SAME DRIVEWAY
14	18"	LP 1+90 @ 1.50%	Q10= 5.29 C.F.S.	15	18"	LP 1+46 @ 1.05%	Q10= 0.20 C.F.S.

ARCHERS GLEN
LOTS 6 THRU 22 AND
PRESERVATION PARCELS 'A' THRU 'C'

ZONING: RC-DEO
TAX MAP No. 9, PARCEL No. 301, GRID No. 22
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

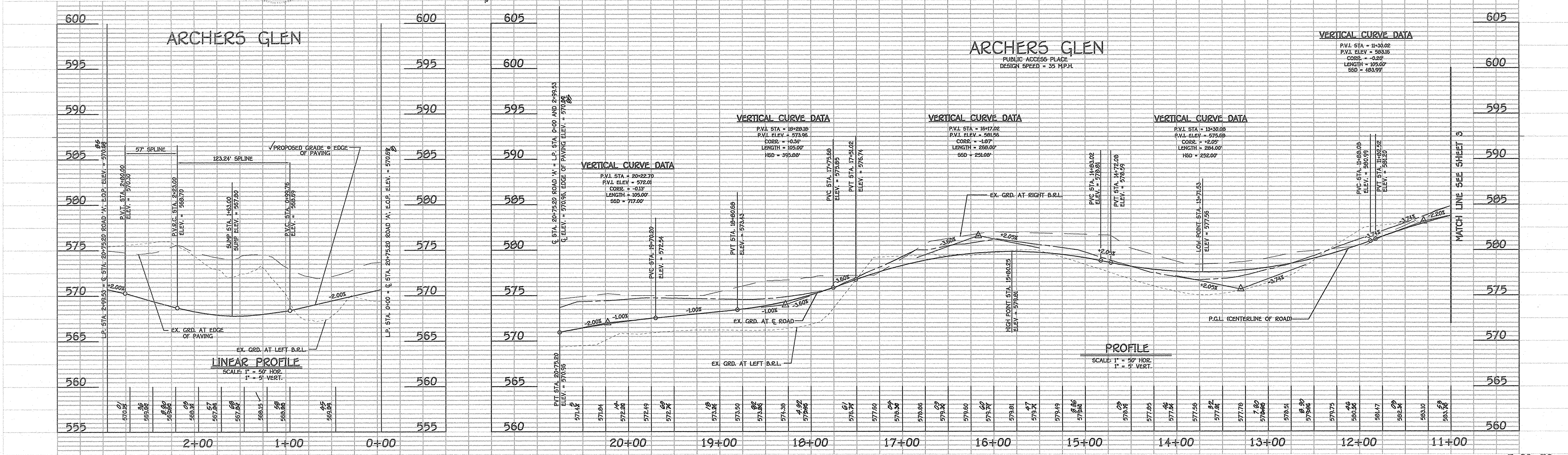
ARCHERS GLEN
PLAN AND PROFILE

OWNER: ARNOLD M. SEWELL
13000 OLD FREDERICK ROAD
SYKESVILLE, MARYLAND 21784

DEVELOPER: VIKING DEVELOPMENT CORPORATION
5850 OLD WASHINGTON ROAD
SYKESVILLE, MARYLAND 21784

SCALE: AS SHOWN DATE: JUNE 5, 2003 DWG. NO. 4 OF 18
DES. R. ISAACS DEN. J. LAMKE CHK. C. CROVO, SR.

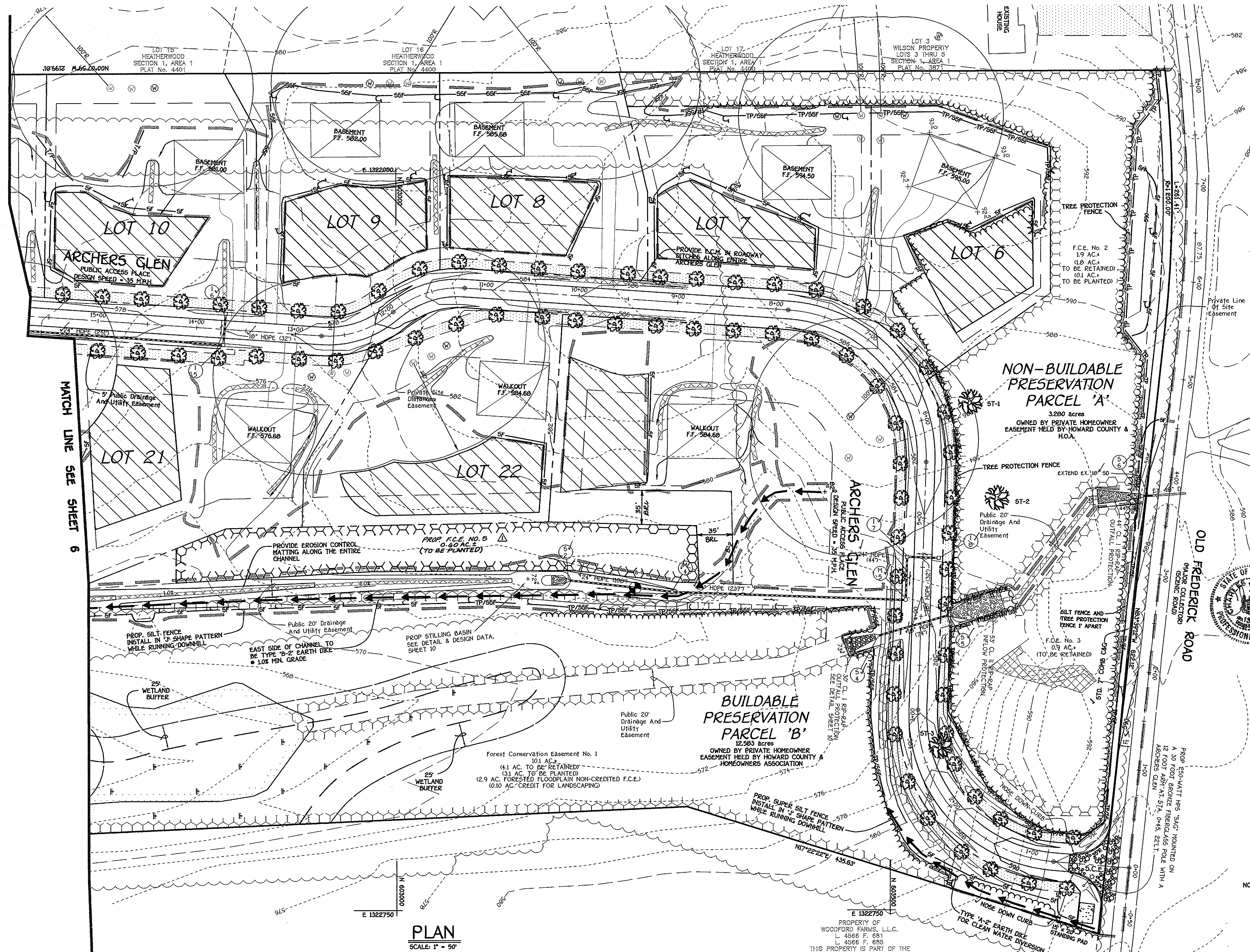
FISHER, COLLINS & CARTER, INC.
14222 CITE HARBOR ROAD
DUBLIN, OHIO 43017
(614) 461-3895



STREET TREE SCHEDULE

SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	107	PLATANUS X ACERIFOLIA "BLOODGOOD" BLOODGOOD LONDON PLANE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

FINANCIAL SURETY FOR THE 107 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$32,100.00.
NOTE: STREET TREE TYPE IS ONLY A RECOMMENDATION AND MAY BE REVISED TO AN ACCEPTABLE COUNTY EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL.



PLAN
SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTINENTAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL FREE
ELLCOTT CITY, MARYLAND 21114
4100 461 - 2895

OWNER
ARNOLD M. SEWELL
13000 OLD FREDERICK ROAD
SYKESVILLE, MARYLAND 21784

DEVELOPER
VIKING DEVELOPMENT CORPORATION
5090 OLD WASHINGTON ROAD
SYKESVILLE, MARYLAND 21784

PROPERTY OF
WOODFORD FARMS, L.L.C.
L 4568 F. 681
L 4568 F. 683
THIS PROPERTY IS PART OF THE
HOWARD COUNTY AGRICULTURAL
PRESERVATION PROGRAM -
BASEMENT NO. 110-94-04E.

By The Developer:
"I/We Certify That All 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 Shall Engage A Registered Professional Engineer To Supervise Pond Construction And 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."

Vincent R. Collette 8/15/03
Signature Of Developer
VINCENT R. COLLETTE
Printed Name Of Developer

By The Engineer:
"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/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion."

Charles J. Cravo Sr. 8/16/03
Signature Of Engineer
CHARLES J. CRAVO SR.
Printed Name Of Engineer

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

John J. Lopez 8/25/03
USDA Natural Resources Conservation Service Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

John J. Lopez 8/25/03
Howard Soil Conservation District Date

Approved: Department Of Public Works
William Z. Mahan Jr. 8-27-03
Chief, Bureau Of Highways Date

Approved: Department Of Planning And Zoning
Cindy Hamilton 9/29/03
Chief, Division Of Land Development Date

Chris Dorman 9/15/03
Chief, Development Engineering Division Date

AS-BUILT CERTIFICATION
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Chad 13204
Signature P.E. No.
9/24/06 Date

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

NO.	DESCRIPTION	DATE
1	REVISE SHEET NO. AND ADD F.C.E. NO. 5	10-29-03

LEGEND

- SSP-SSP-SSP SUPER-SILT FENCE
- SF-SF-SF SILT FENCE
- TP-TP-TP TREE PROTECTION FENCE
- S.C.E. STABILIZED CONSTRUCTION ENTRANCE
- Earth Dike
- DENOTES L.O.D. LIMITS OF DISTURBANCE
- E.C.M. DENOTES EROSION CONTROL MATTING (TO BE PLACED IN ALL ROADWAY DITCHES AND IN ALL SWALES)
- DENOTES PROPOSED HOUSE LOCATION AND ROOFTOP DISCONNECTION RUNOFF DIRECTION

NOTE: SEE SHEETS 17 & 18 FOR CONSTRUCTION DETAILS OF PROPOSED S.W.M./SEDIMENT BASIN.

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
ARCHERS GLEN
LOTS 6 THRU 22 AND
PRESERVATION PARCELS 'A' THRU 'C'
ZONED: RC-DEO
TAX MAP No. 9, PARCEL No. 301, GRID No. 22
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JUNE 5, 2003
SHEET 5 OF 18

AS-BUILT 3-24-06

SWM SUMMARY TABLE DRAINAGE AREA 'A'

TYPE OF REQUIREMENT	VOLUME REQUIRED	VOLUME PROVIDED AND NOTES
Re Vol Recharge Vol. for Entire Site	1.740 acres	2.39 acres w/ % Area Method
WQ Vol DESIGN POINT 'A'	0.31 acre-feet	0.31 ac. Ft. • Elev. = 553.24
CP Vol DESIGN POINT 'A'	0.7815 acre-feet	0.80 ac. Ft. • Elev. = 554.25

NOTE: Both Qp (Overbank Flood Protection or 10-year storm) and Qf (extreme Flood Volume of 100-year storm) are not required for this since this watershed area is not classified as one of the sensitive watershed areas for Howard County.

SEDIMENT BASIN #1 DATA

FINAL DRAINAGE AREA = 24.70 AC.
 STORAGE REQUIRED:
 WET = 44,460 CU. FT.
 DRY = 44,460 CU. FT.
 STORAGE PROVIDED:
 WET = 44,689 CU. FT. • ELEV. = 554.38
 DRY = 49,090 CU. FT. • ELEV. = 555.75
 BOTTOM ELEV. = 553.00
 TOP OF EMBANKMENT ELEV. = 559.00
 CLEAN-OUT ELEV. = 553.74
 RISER CREST ELEV. = 555.75
 Q1 ex. = 0.63 C.F.S.
 Q1 prop. = 0.60 C.F.S.
 Q10 ex. = 16.9 C.F.S.
 Q10 prop. = 29.4 C.F.S.

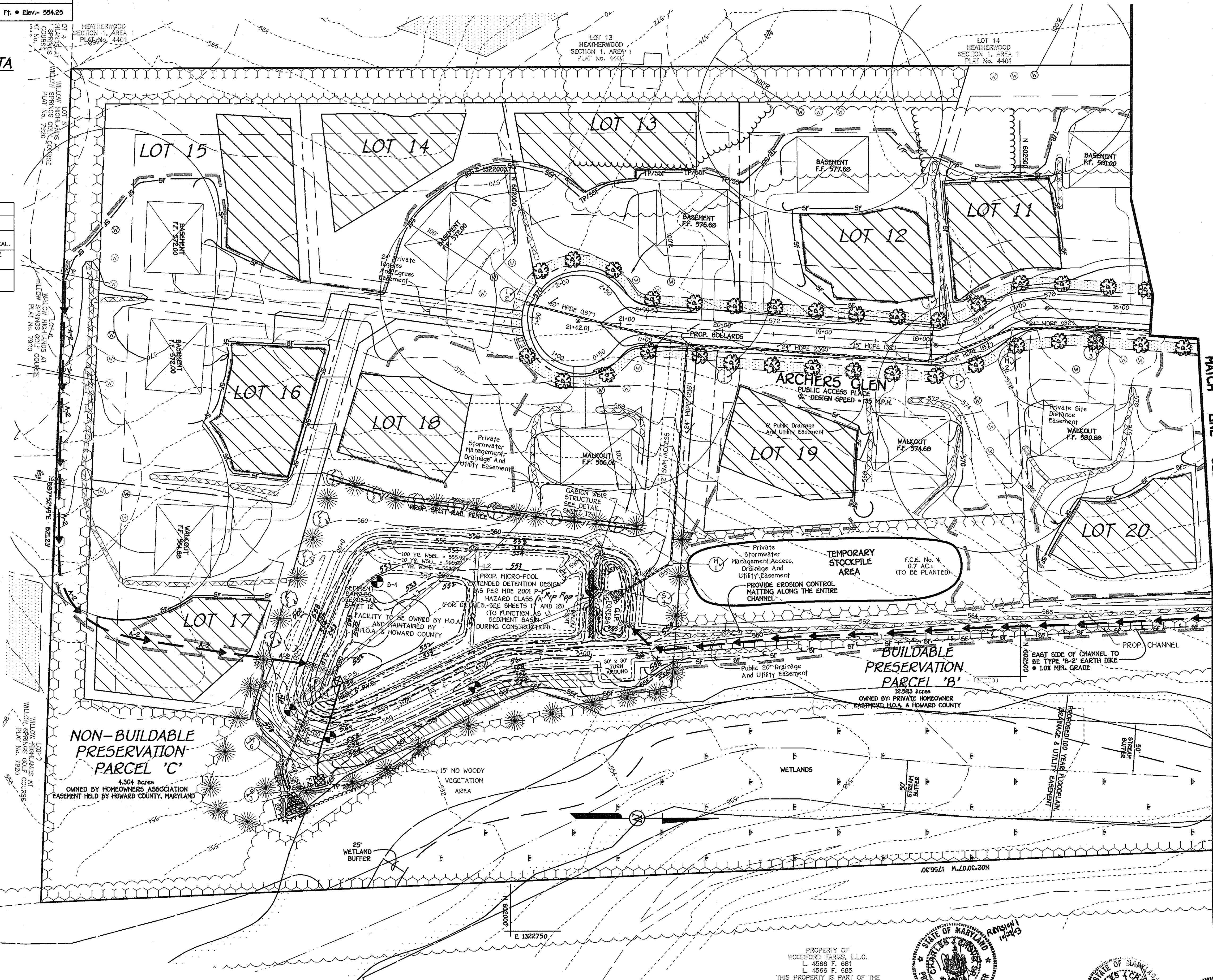
SWM LANDSCAPE LEGEND

QUANTITY	SYMBOL	DESCRIPTION
11		ACER RUBRUM, OCTOBER GLORY / RED SUNSET, RED MAPLE 2-1/2"-3" CAL.
35		PINUS STROBUS/EASTERN WHITE PINE 6'-8" HEIGHT

- NOTES:
 1. PLANT LANDSCAPE TREES ALONG PERIMETER D-1 (D) THREE FEET BEHIND THE PROPOSED SPLIT-RAIL FENCE ON THE UPHILL SIDE.
 2. PLANT LANDSCAPE TREES ALONG PERIMETER D-3 WITHIN THE PROPOSED FOREST CONSERVATION EASEMENT

BAFFLE DESIGN COMPUTATIONS

D = DISTANCE BETWEEN INFLOW & OUTFLOW = 315'
 A = AREA OF NORMAL POOL = 44,689 CU. FT.
 W = EFFECTIVE WIDTH = A/D = 44,689/315 = 141.87'
 $L_1 = 2 \cdot 3.35 \cdot 0.6 \cdot L = L_1 \cdot L_2 \cdot L_3 \cdot L_4 = 130 \cdot 100 \cdot 230 \cdot 15$
 $= 475 \cdot 2 = 237.50 > 141.87 \therefore OK$



By The Developer:
 I/We Certify That All 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 Shall Engage A Registered Professional Engineer To Supervise Pond Construction And 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.

Vincent R. Colasimone 8/15/03
 Signature Of Developer
 Vincent R. Colasimone
 Printed Name Of Developer

By The Engineer:
 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/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Charles J. Crews, Sr. 8/15/03
 Signature Of Engineer
 Charles J. Crews, Sr.
 Printed Name Of Engineer

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Jim Nye, Jr. 8/25/03
 Signature Of Engineer
 Jim Nye, Jr.
 Printed Name Of Engineer

USDA-Natural Resources Conservation Service 8/25/03
 Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

John A. ... 8/25/03
 Signature Of Engineer
 John A. ...
 Printed Name Of Engineer

Approved Department Of Public Works 8-27-03
 Chief Bureau Of Highways
 Date

Approved Department Of Planning And Zoning 9/29/03
 Chief, Division Of Land Development, JA
 Date

... 9/5/03
 Signature Of Engineer
 ...
 Printed Name Of Engineer

Chief, Development Engineering Division

AS-BUILT CERTIFICATION
 I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

... 13204
 Signature
 ...
 Date

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE SHEET NO.	10-27-03

LEGEND

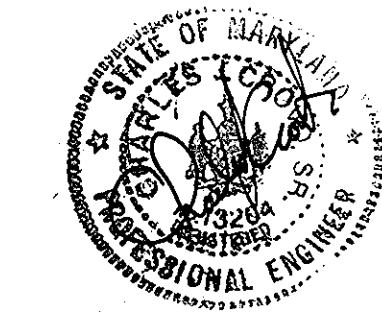
- SFS—SFS—SFS— SUPER-SILT FENCE
- SF—SF—SF— SILT FENCE
- TP—TP—TP— TREE PROTECTION FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- EARTH DIKE
- DENOTES LOD LIMITS OF DISTURBANCE
- DENOTES EROSION CONTROL MATTING
- REMOVEABLE PUMPING STATION
- FILTER BAG
- DENOTES PROPOSED HOUSE LOCATION AND ROOFTOP DISCONNECTION RUNOFF DIRECTION

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK • 10272 BALTIMORE NATIONAL PIKE
 GAITHERSBURG, MARYLAND 20878
 410-911-2895

PLAN
 SCALE: 1" = 50'

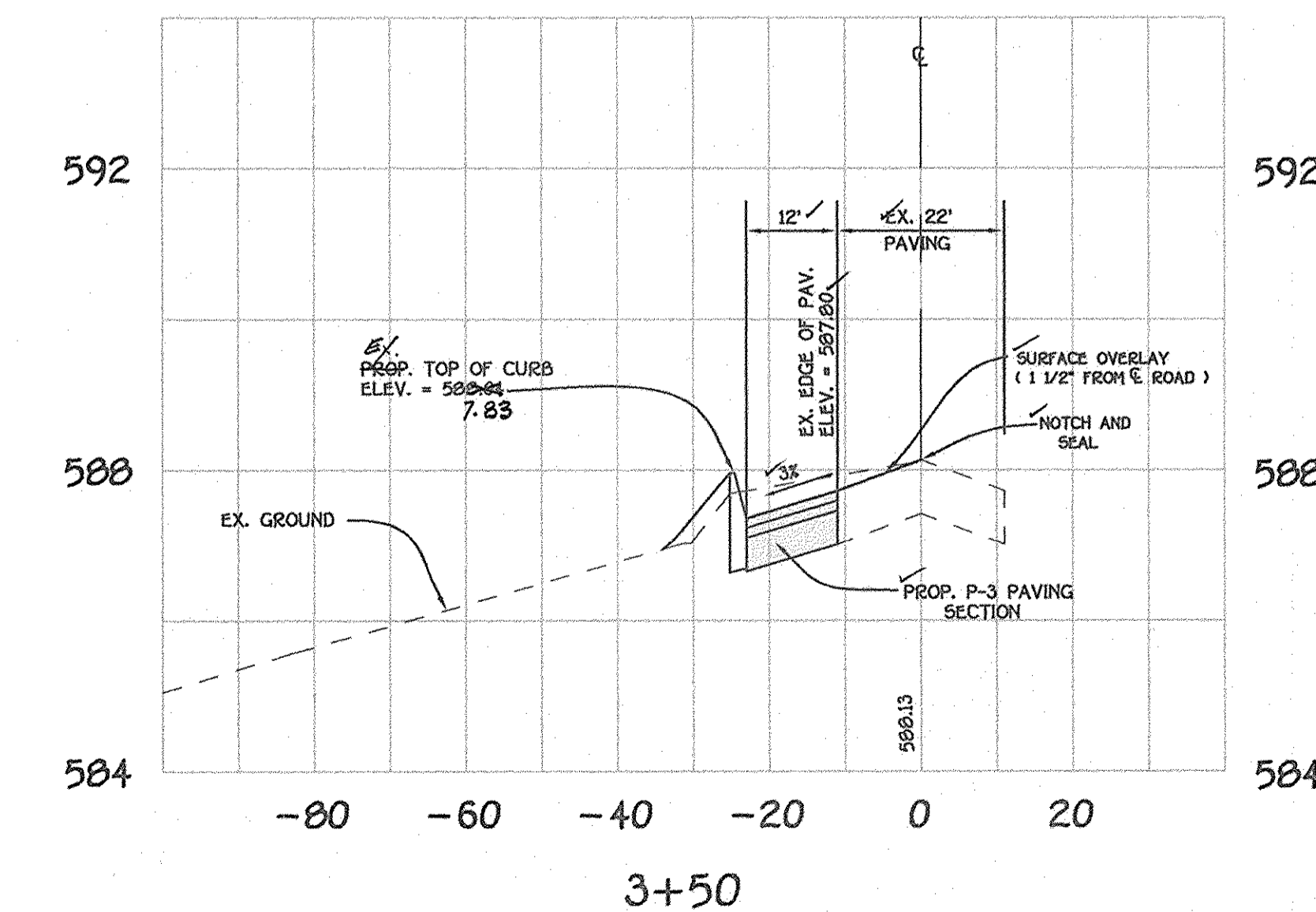
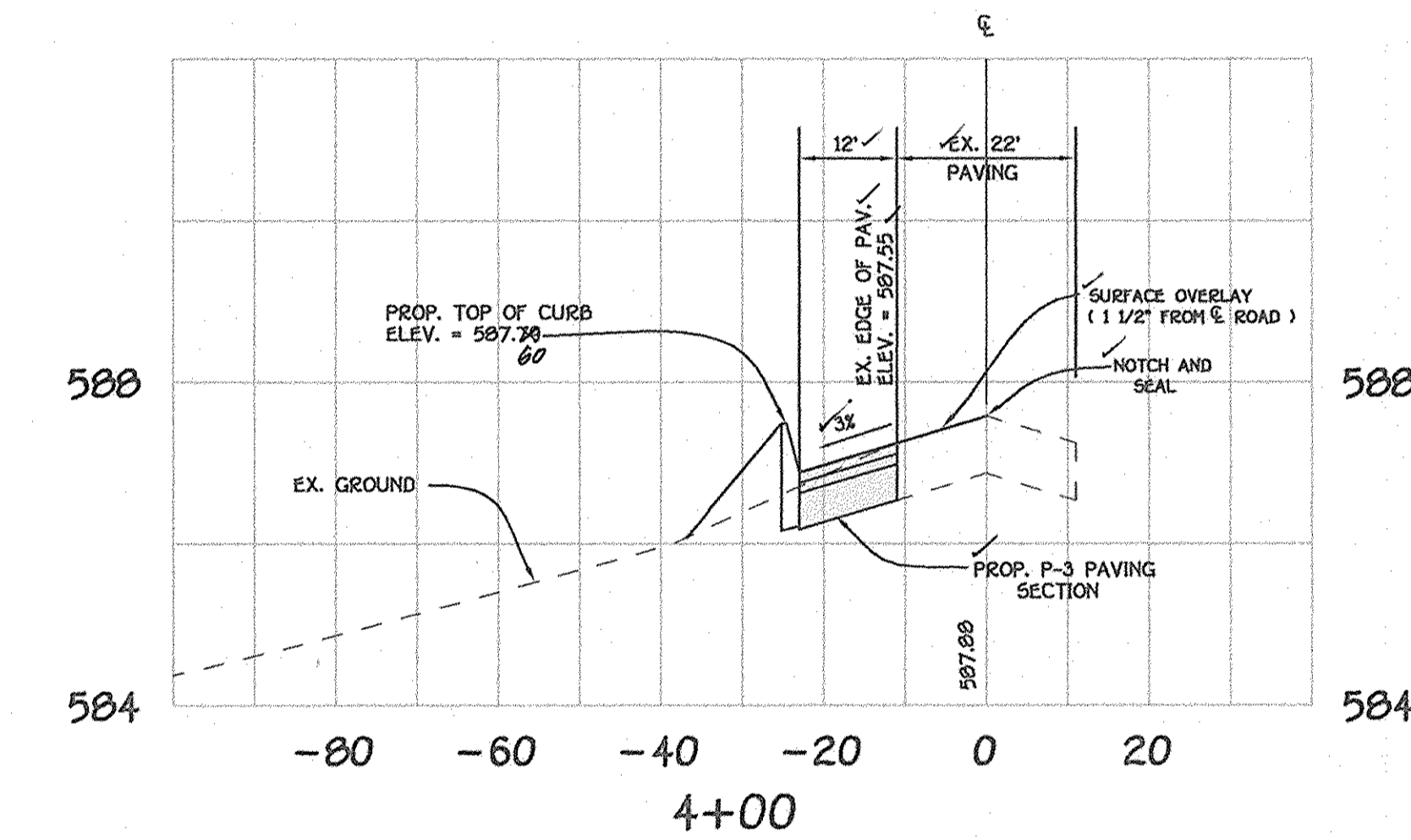
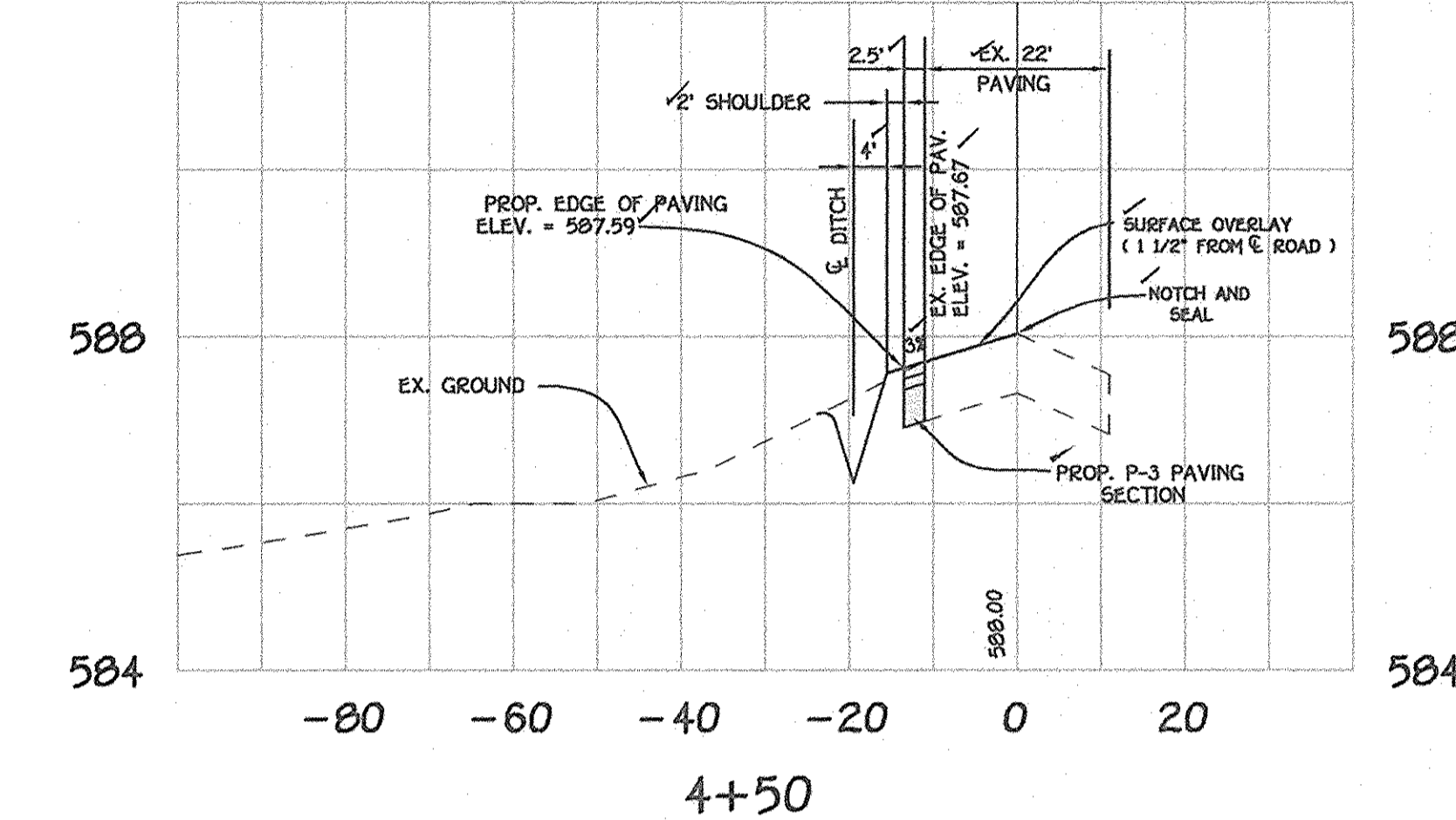
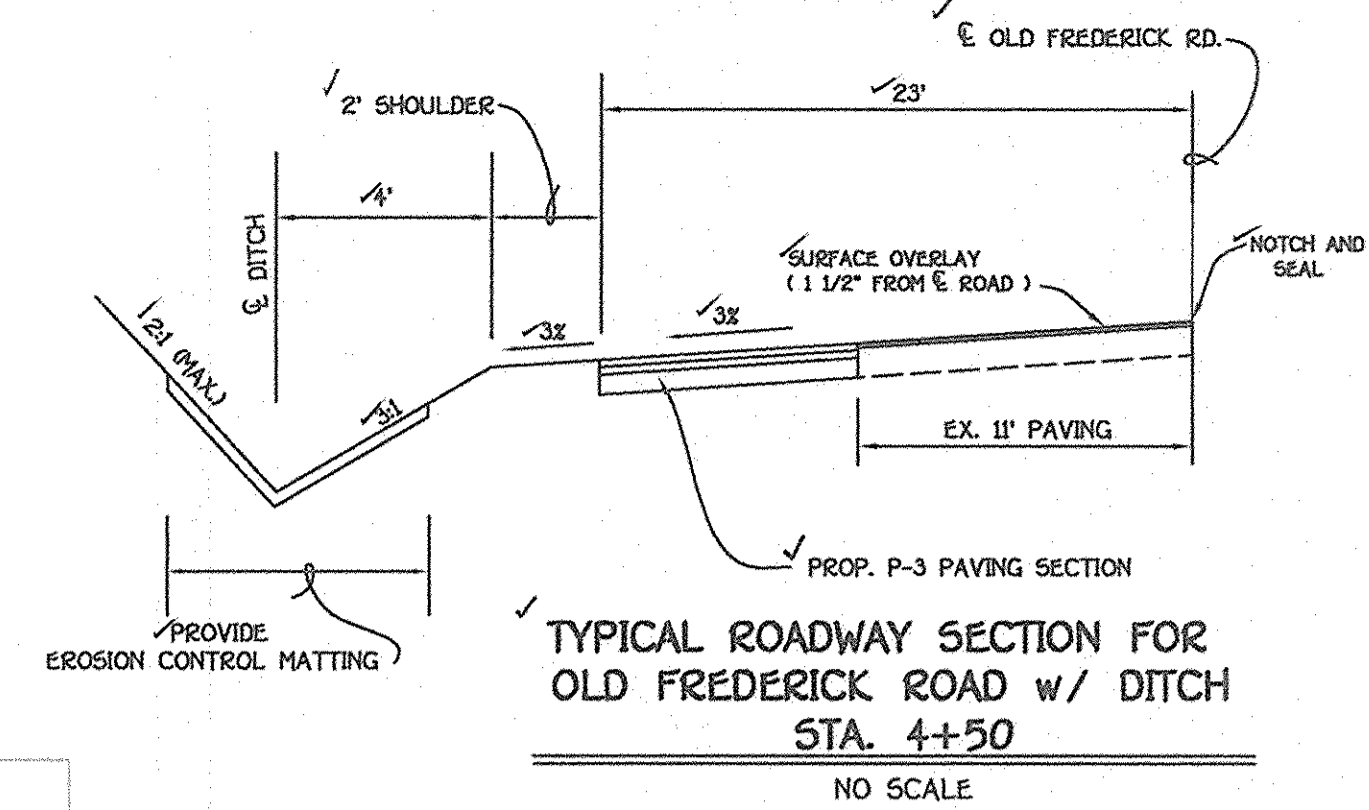
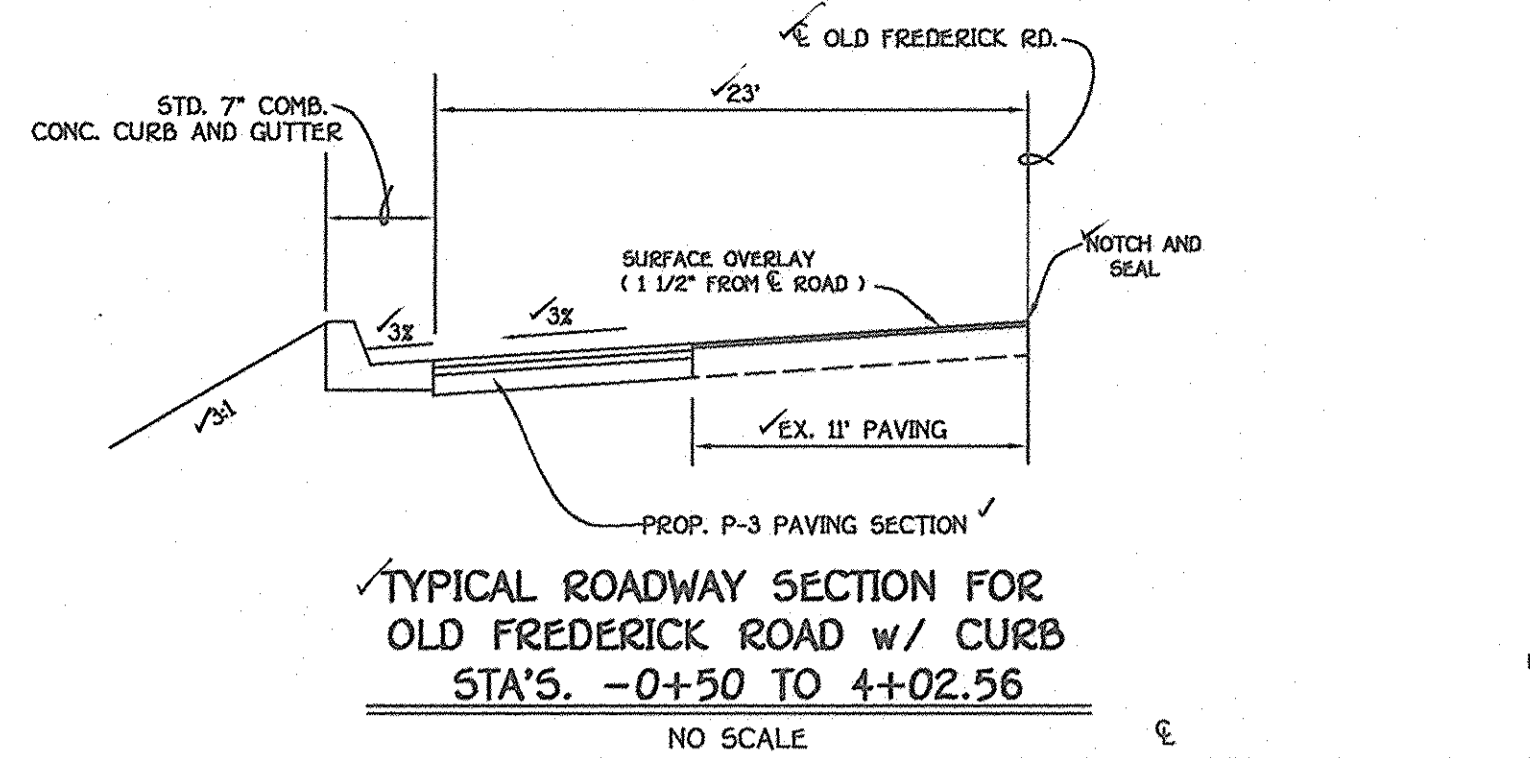
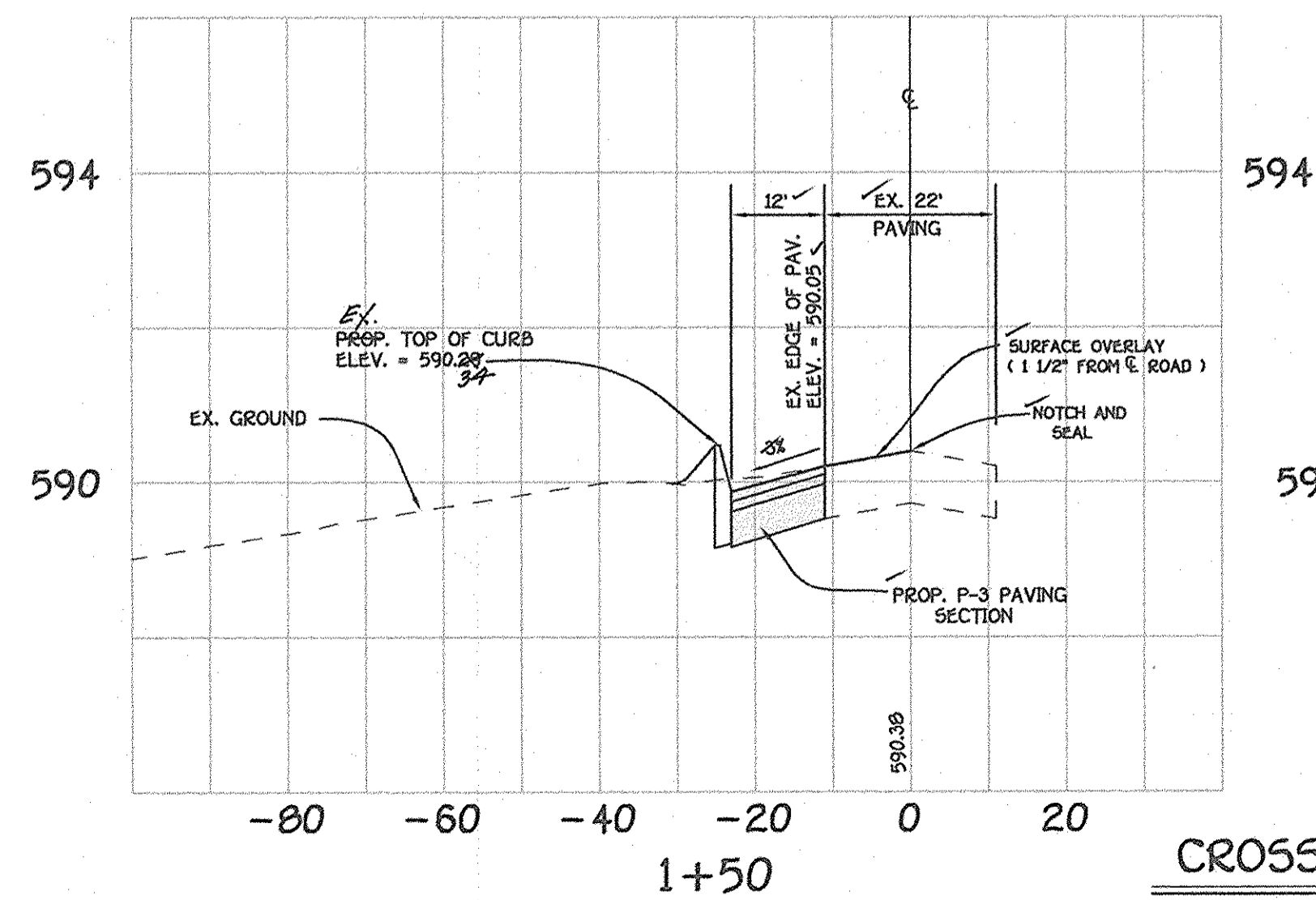
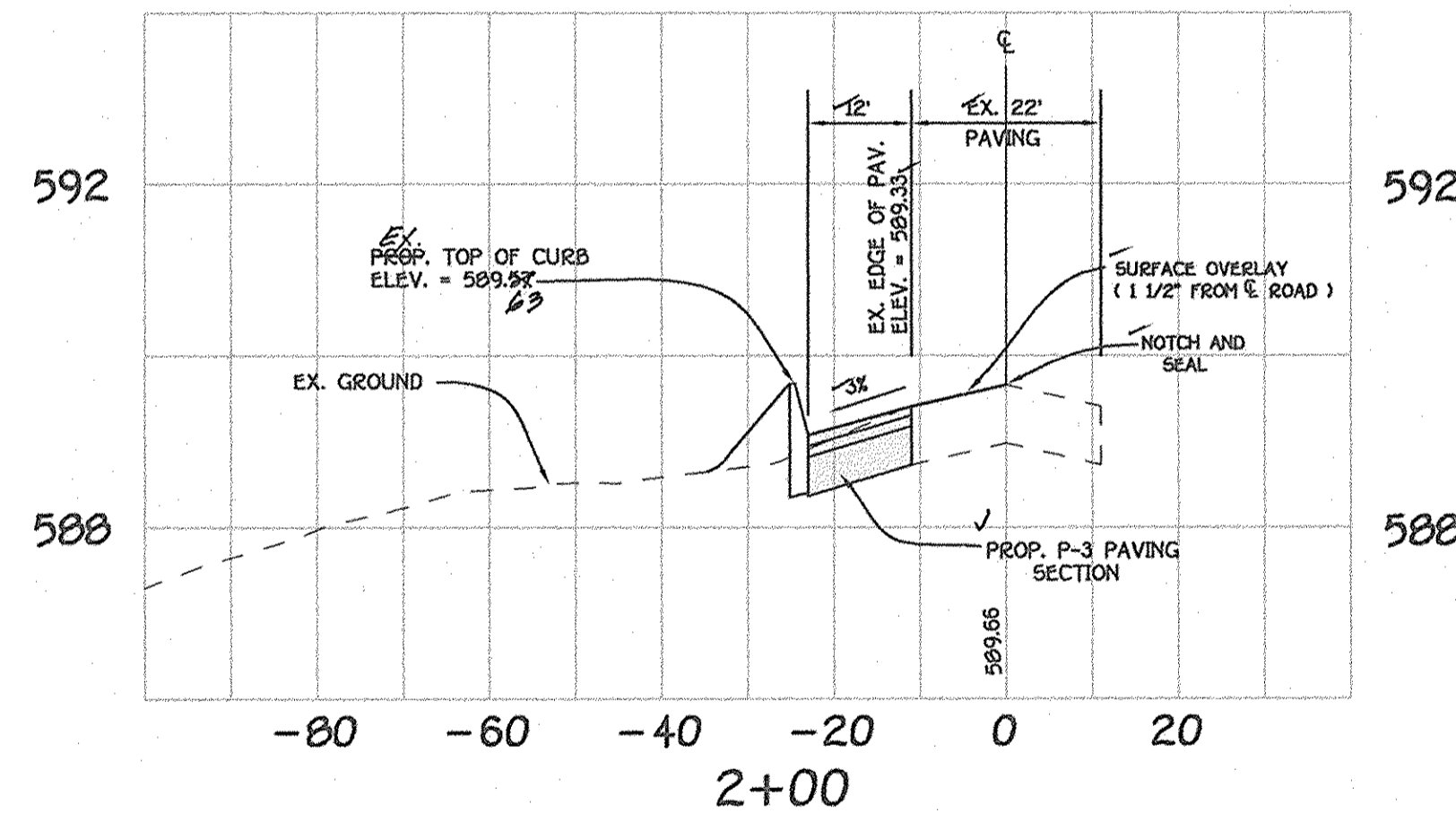
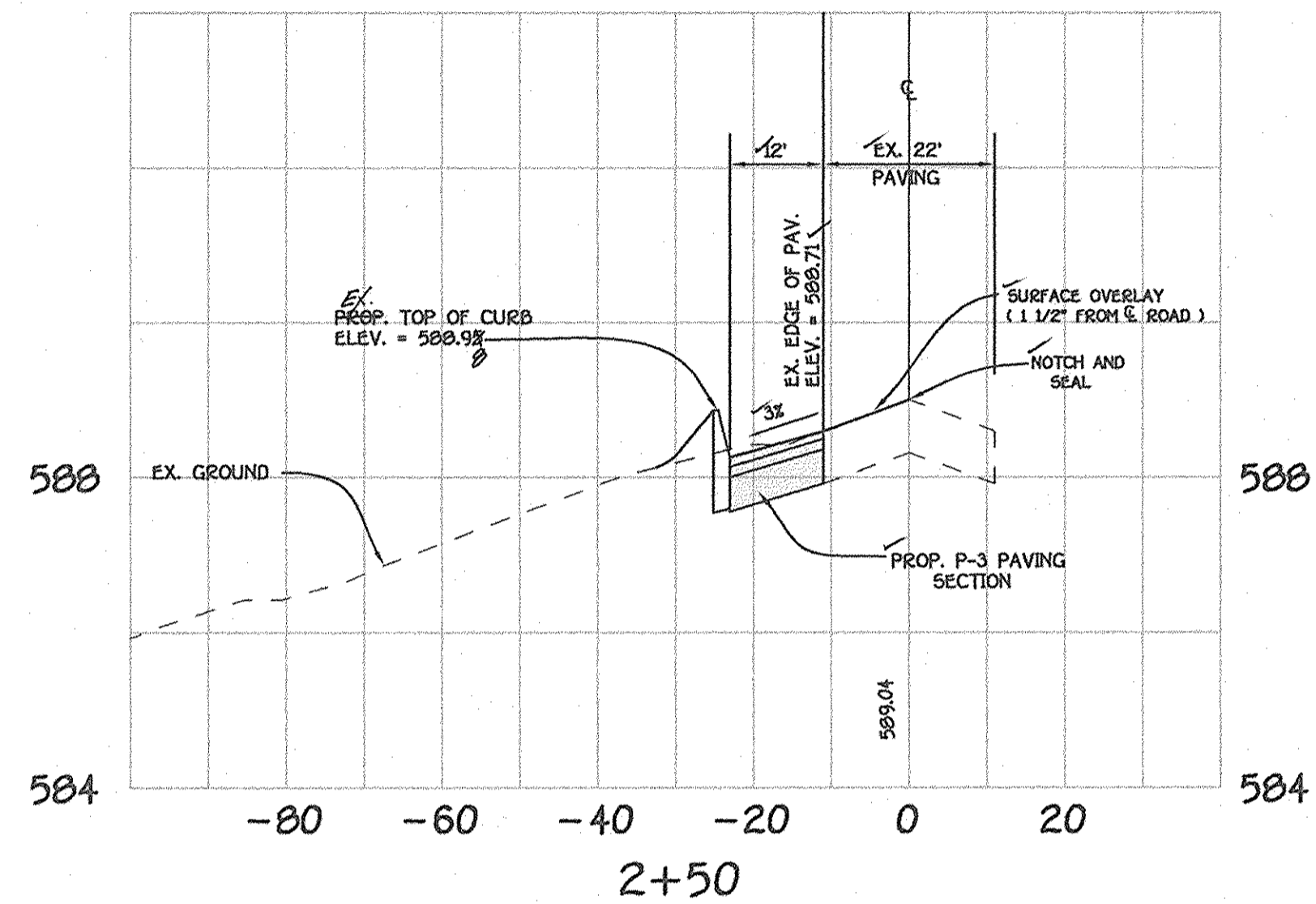
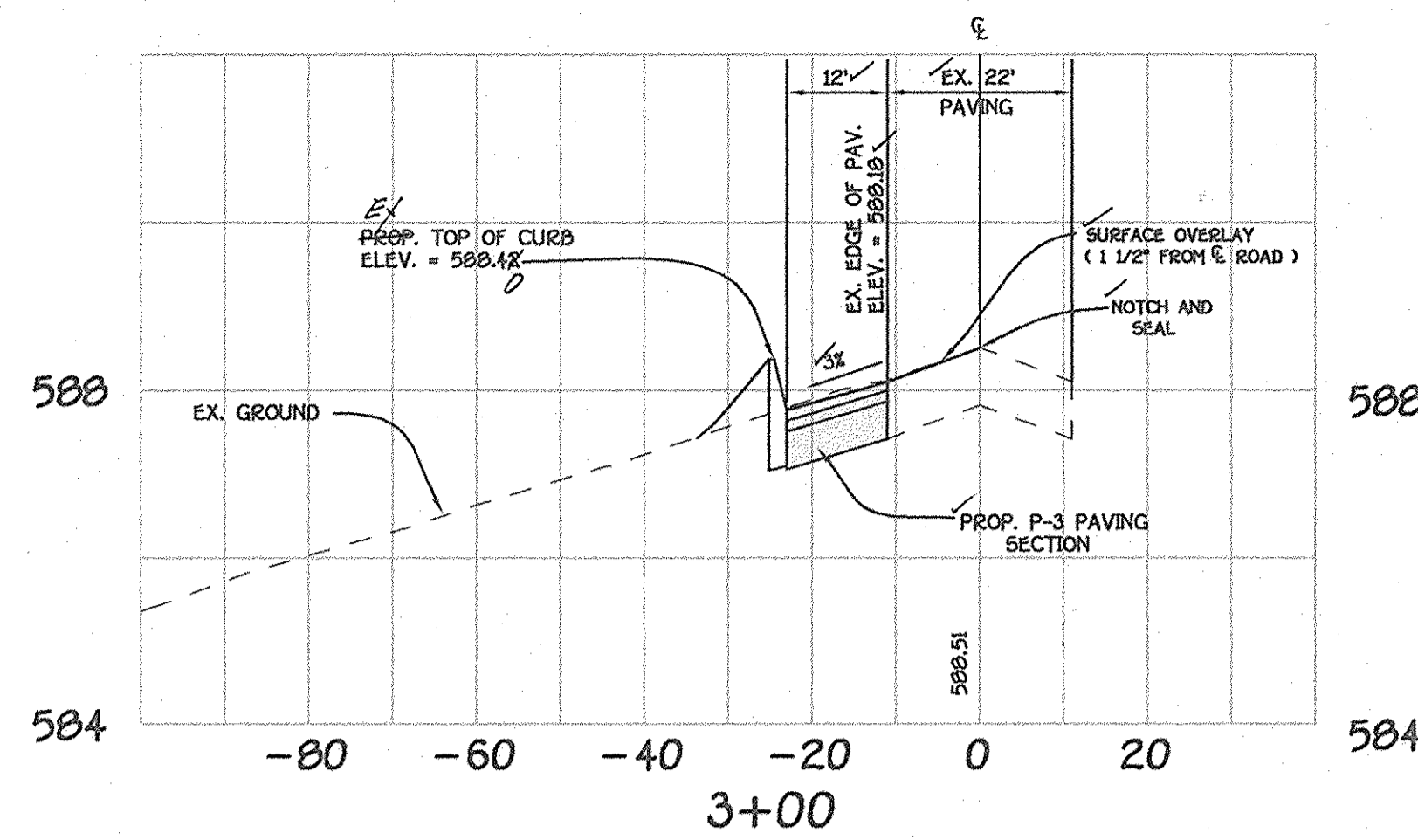
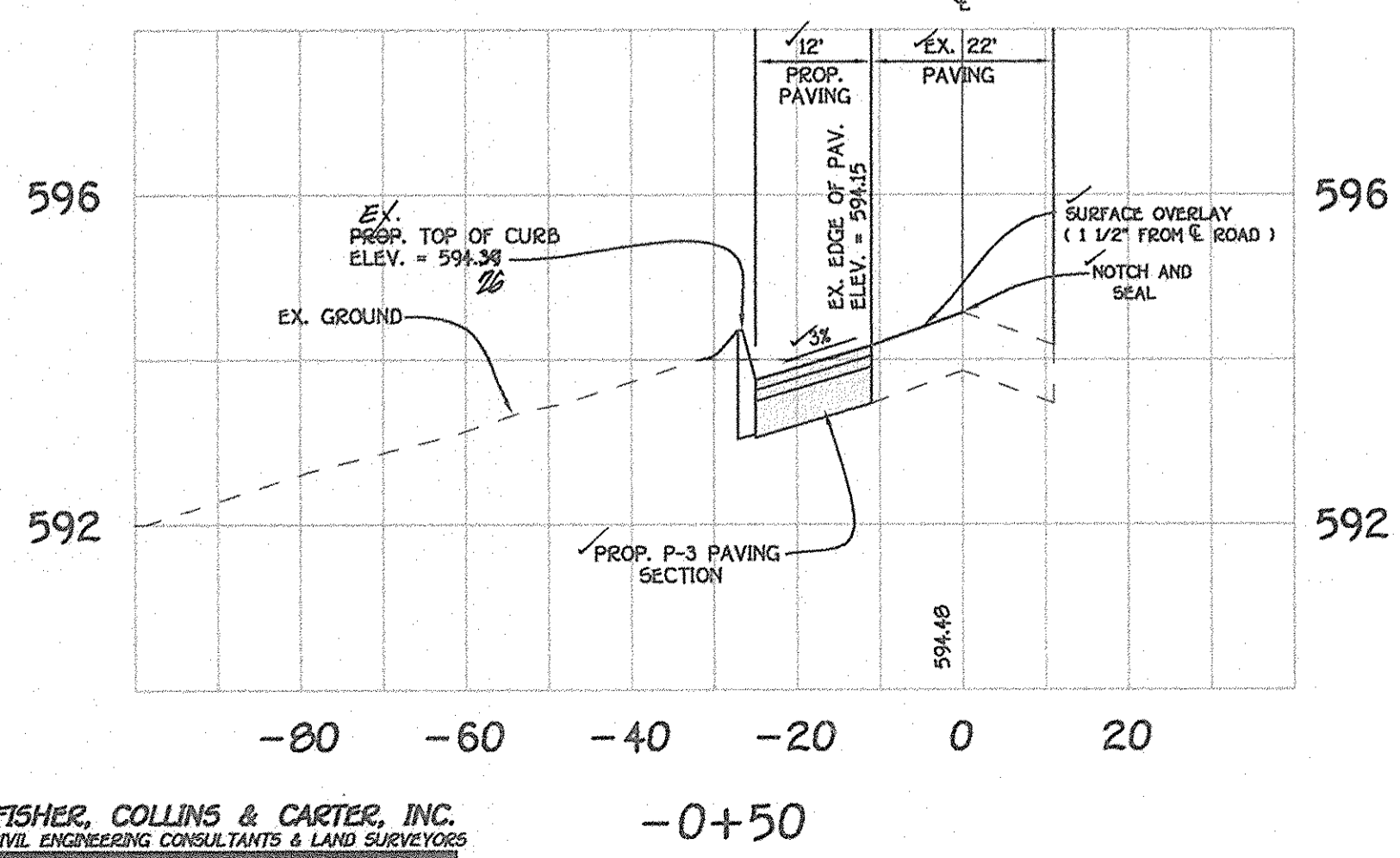
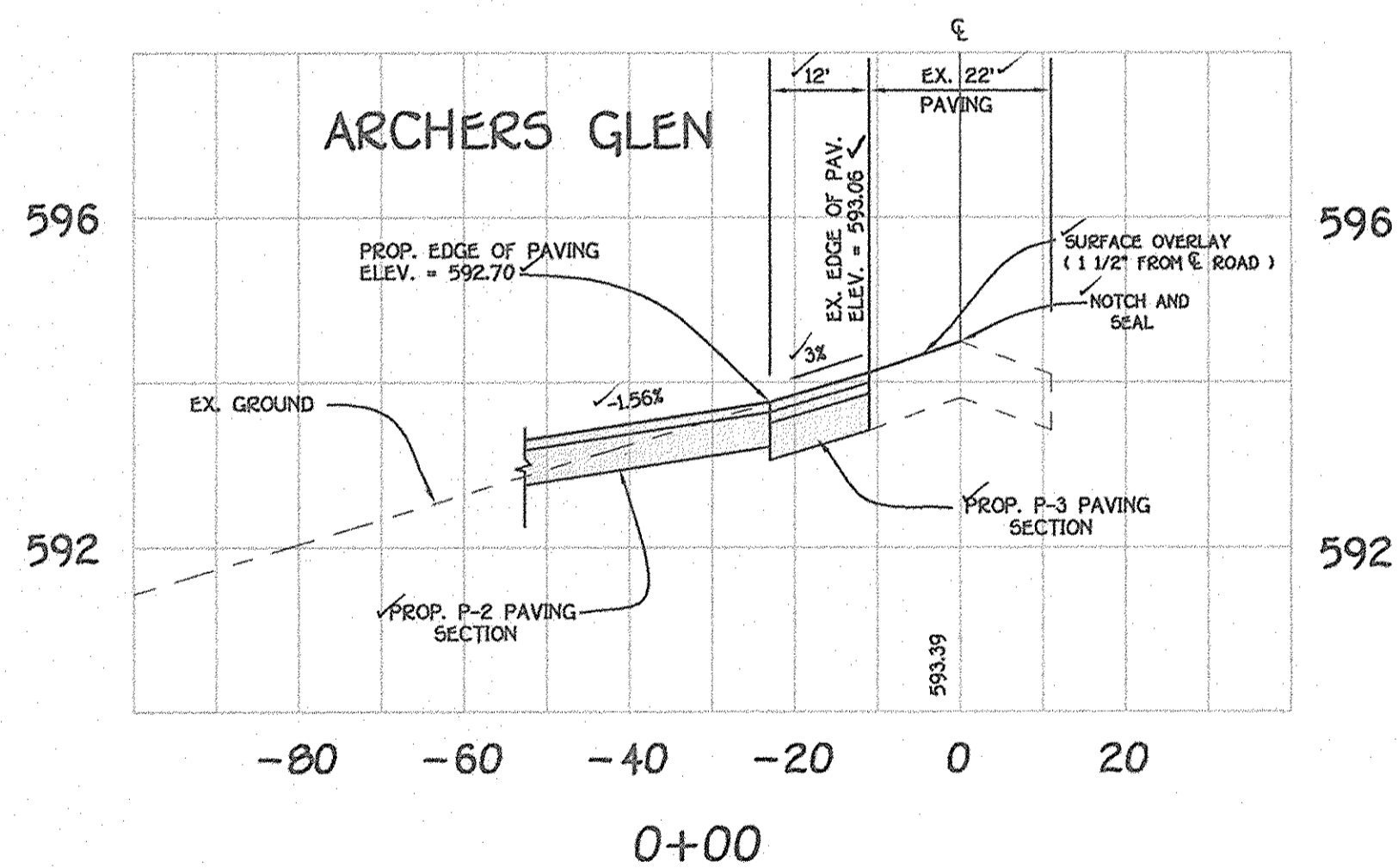
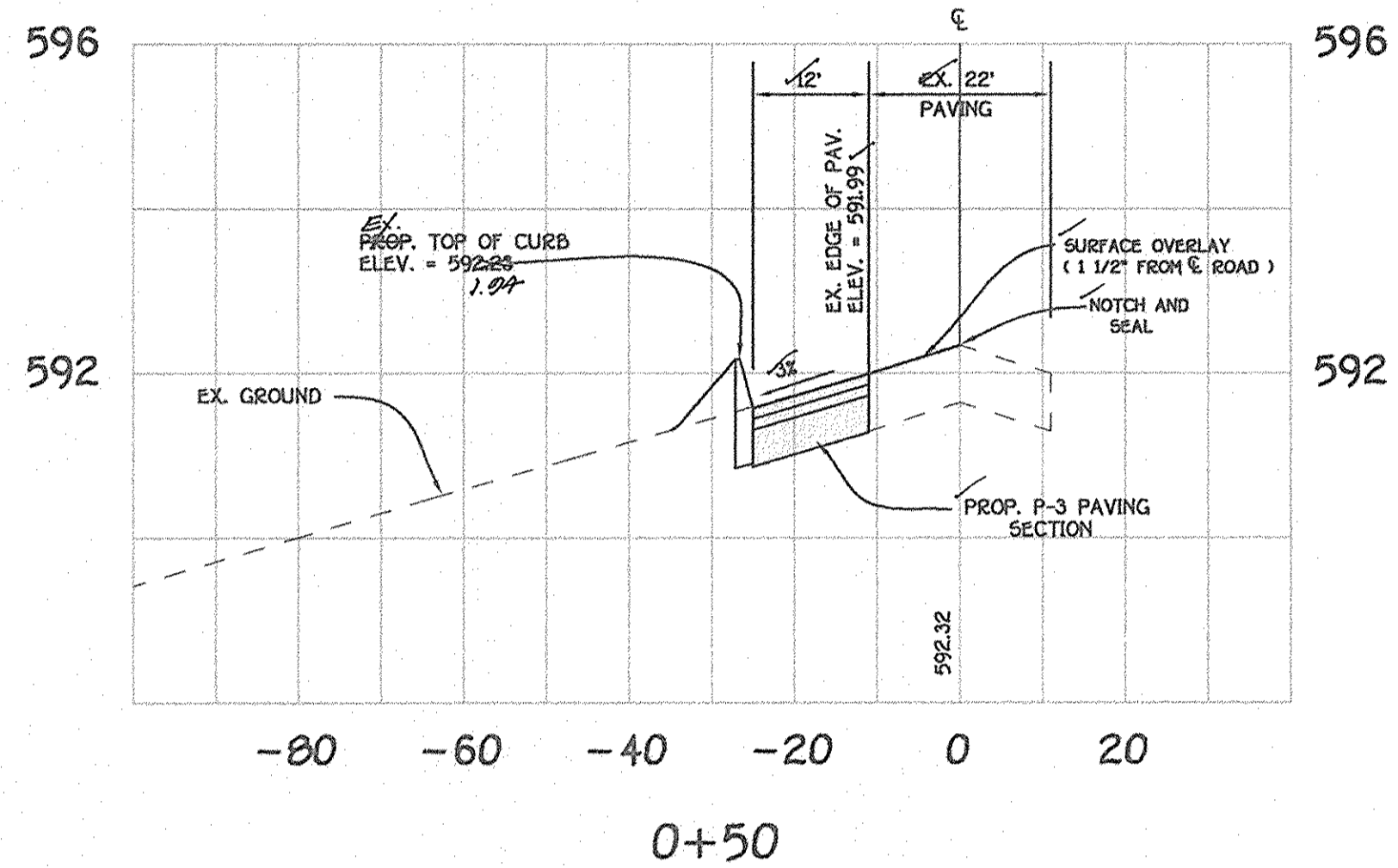
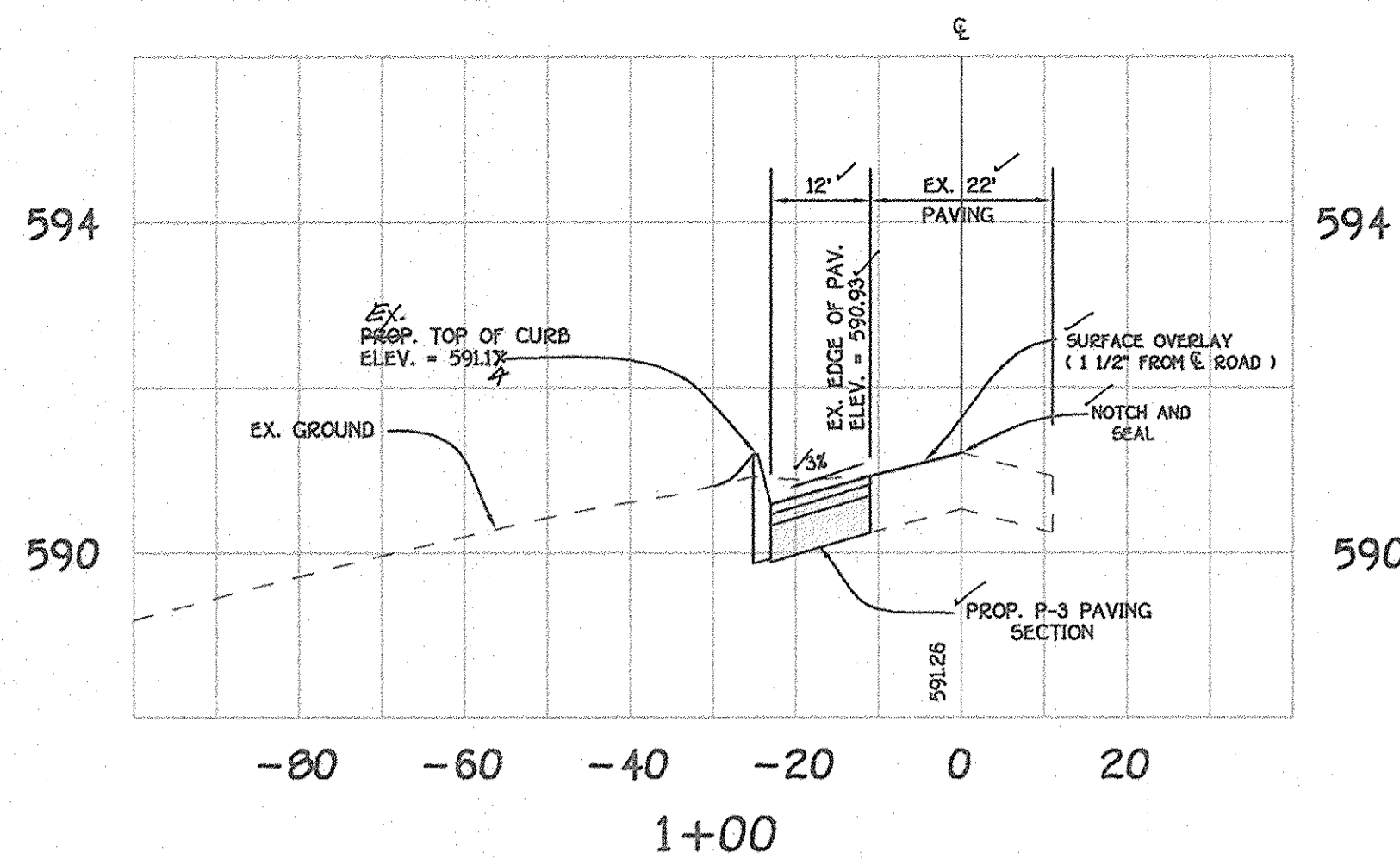
OWNER
 ARNOLD H. SEWELL
 13000 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784

DEVELOPER
 VIKING DEVELOPMENT CORPORATION
 9650 OLD WASHINGTON ROAD
 SYKESVILLE, MARYLAND 21784



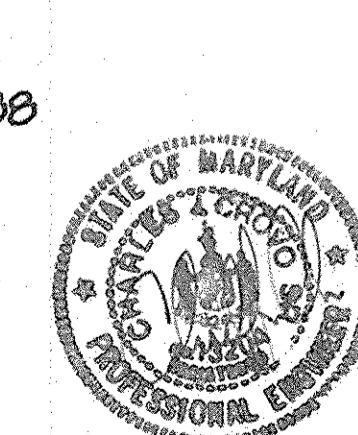
STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
ARCHERS GLEN
 LOTS 6 THRU 22 AND
 PRESERVATION PARCELS 'A' THRU 'C'
 ZONED: RC-DEO
 TAX MAP No. 9, PARCEL No. 301, GRID No. 22
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 5, 2003
 SHEET 6 OF 18

AS-BUILT 9-24-06



APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. ... 8-27-03
 CHIEF, BUREAU OF HIGHWAYS DATE
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris ... 9/17/03
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Chris ... 9/15/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	REVISE SHEET NO.	REVISION	DATE



OLD FREDERICK ROAD
 CROSS-SECTIONS
ARCHERS GLEN
 LOTS 6 THRU 22 AND
 PRESERVATION PARCELS 'A' THRU 'C'
 (A RESUBDIVISION OF "WILSON PROPERTY", LOT 2, PLAT No. 3797
 ZONED: RC-DEO
 TAX MAP No. 9 PARCEL No. 301 GRID No. 22
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 5, 2003
 SHEET 7 OF 10

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 410-462-2295

CROSS-SECTIONS
 SCALE: 1" = 20' HOR.
 1" = 2' VER.

OWNER
 ARNOLD M. SEWELL
 13009 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784

DEVELOPER
 VIKING DEVELOPMENT CORPORATION
 5850 OLD WASHINGTON ROAD
 SYKESVILLE, MARYLAND 21784

AS-BUILT 3-24-06

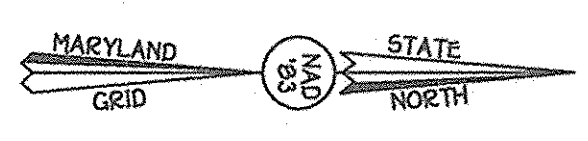
APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 9-3-03 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 9/29/03 DATE

APPROVED: DEVELOPMENT ENGINEERING DIVISION
 9/5/03 DATE

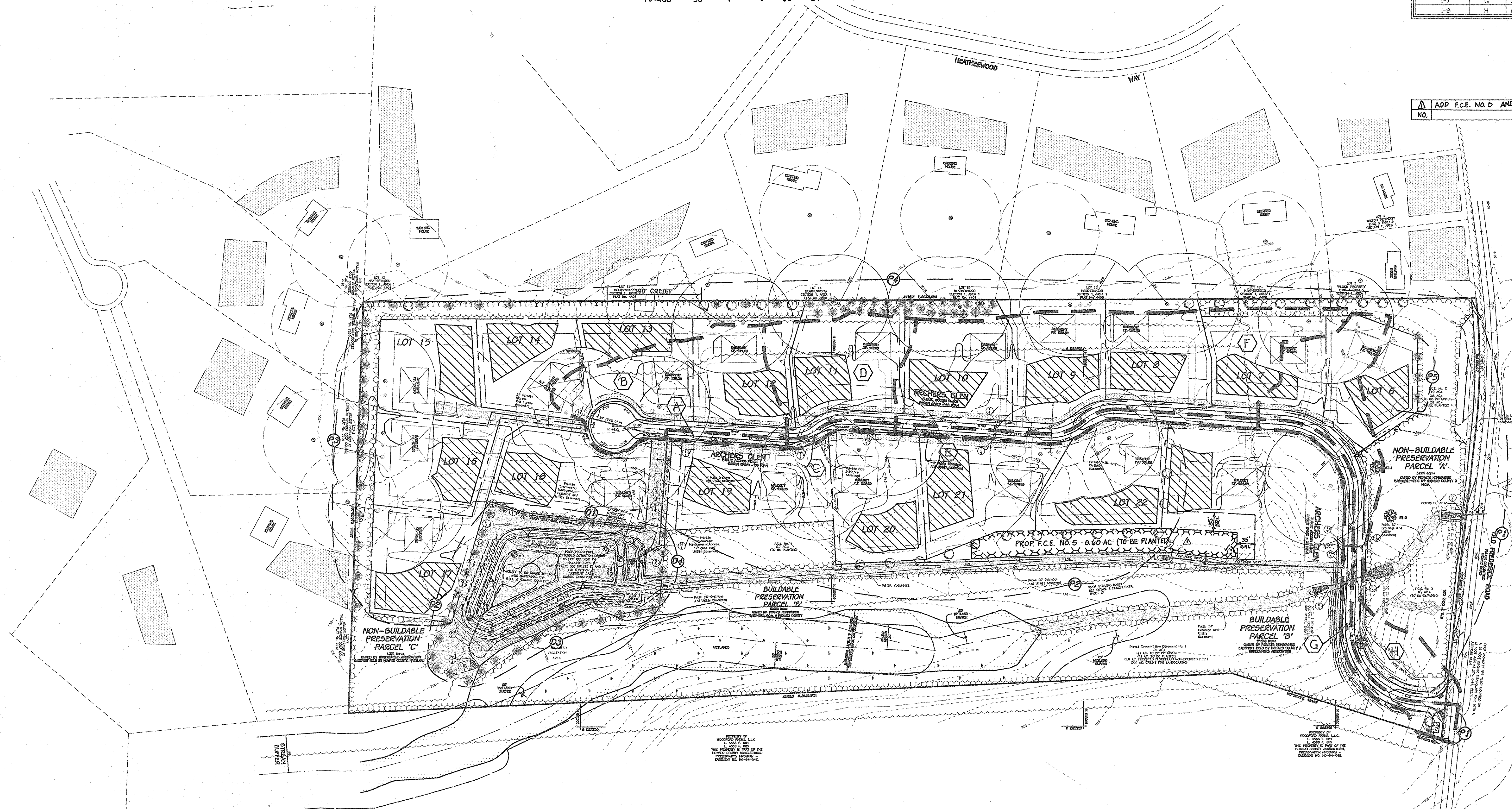
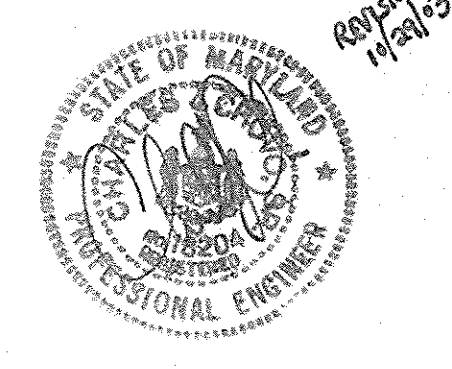
SCHEDULE A PERIMETER LANDSCAPE EDGE											
PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED			NUMBER OF PLANTS PROVIDED		
						SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO ROADWAY	B	793'	YES F.C.E. (757')	NO	1	1	0	1	1	0
P-2	ADJACENT TO PERIMETER	A	1270'	YES F.C.E. (400')	NO	15	0	0	15	0	0
P-3	ADJACENT TO PERIMETER	A	765'	YES F.C.E. (205')	NO	9	0	0	2	14	0
P-4	ADJACENT TO PERIMETER	A	2199'	YES 390'	NO	33	0	0	14	38	0
P-5	ADJACENT TO ROADWAY	B	150'	YES F.C.E. (50')	NO	0	0	0	0	4	0
TOTALS -						58	1	0	32	57	0

NOTE: AN ADDITIONAL 25 EVERGREEN TREES TO BE PLANTED IN AGREEMENT WITH THE NEIGHBORS IN P-3. THESE TREES ARE NOT INCLUDED IN THE LANDSCAPE SURETY, BUT THE 25 EXTRA TREES ARE SHOWN IN THE PLANT LIST.



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	C'	ZONED	I IMP.
I-1	A	0.11 AC.	0.46	RC-DEO	30%
I-2	B	0.83 AC.	0.49	RC-DEO	34%
I-3	C	0.95 AC.	0.38	RC-DEO	18%
I-4	D	0.10 AC.	0.70	RC-DEO	60%
I-5	E	1.26 AC.	0.50	RC-DEO	31%
I-6	F	0.21 AC.	0.56	RC-DEO	44%
I-7	G	2.41 AC.	0.37	RC-DEO	17%
I-8	H	0.12 AC.	0.61	RC-DEO	46%

ADD F.C.E. NO. 0 AND REVISE SHEET NO. 10-29-03
 NO. REVISION DATE



LANDSCAPE LEGEND - PLANT LIST					
QUANTITY REQUIRED	QUANTITY PROVIDED	SYMBOL	DESCRIPTION	SIZE	CONDITION
11	11	(Symbol)	ACER RUBRUM, OCTOBER GLORY / RED SUNSET, RED MAPLE	2-1/2"-3" CAL.	BURLAP & BALL
58	32	(Symbol)	QUERCUS COCCINEA / SCARLET OAK	2-1/2"-3" CAL.	BURLAP & BALL
36	32*	(Symbol)	PINUS STROBUS/EASTERN WHITE PINE	6'-8" HEIGHT	BURLAP & BALL

*NOTE: 25 EXTRA EVERGREEN TREES ARE PROVIDED IN THE FIELD IN AGREEMENT WITH THE NEIGHBORS BUT ARE NOT SHOWN ON THE PLANS.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING					TOTALS
LINEAR FEET OF PERIMETER	D1: 352'	D2: 345'	D3: 523'	D4: 156'	
NUMBER OF TREES REQUIRED:					27
SHADE TREES	7	7	10	3	35
EVERGREEN TREES	9	9	13	4	
CREDIT FOR EXISTING VEGETATION (NO, YES AND 3) (FOR SHADE TREES)	NO	YES (FCE) (477)	YES (FCE) (523)	YES (FCE) (567)	YES
CREDIT FOR OTHER LANDSCAPING (NO, YES AND 3)	NO	NO	NO	NO	
NUMBER OF TREES PROVIDED:					11
SHADE TREES	7	4	0	0	35
EVERGREEN TREES	9	9	13	4	

NOTES:
 1. PLANT LANDSCAPE TREES ALONG PERIMETER D-1 (3) THREE FEET BEHIND THE PROPOSED SPLIT-RAIL FENCE ON THE UPRILL SIDE.
 2. PLANT LANDSCAPE TREES ALONG PERIMETER D-3 WITHIN THE PROPOSED FOREST CONSERVATION EASEMENT.
 3. A LANDSCAPE CREDIT IS REQUESTED ALONG PORTIONS OF P-2 FOR A TOTAL OF 0.1 ACRE OR 4,356 S.F. FOR \$2178.00 LANDSCAPE CREDIT AMOUNT, WHICH REDUCES THE FOREST CONSERVATION SURETY TO \$176,853.60 FROM \$179,031.60.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21042
 4100 401 - 2855

OWNER
 ARNOLD M. SEWELL
 13000 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND

DEVELOPER
 VIKING DEVELOPMENT CORPORATION
 5090 OLD WASHINGTON ROAD
 SYKESVILLE, MARYLAND 21784



STORM DRAIN DRAINAGE AREA MAP AND LANDSCAPING PLAN
 ARCHERS GLEN
 LOTS 6 THRU 22 AND PRESERVATION PARCELS 'A' THRU 'C'
 ZONED: RC-DEO
 TAX MAP No. 9, PARCEL No. 301, GRID No. 22
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 Scale: 1" = 100'
 DATE: JUNE 9, 2003
 SHEET 8 OF 18
 F 03-70

AS-BUILT 3-24-06

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	569.62	569.62	562.99	ARCHERS GLEN	STA. 20+34	16' L.	OPEN END GRATE	S.D. - 4.36
I-2	569.75	569.75	563.04	ARCHERS GLEN	L.P. STA. 1+63.00	15' L.	OPEN END GRATE	S.D. - 4.36
I-3	573.81	573.81	566.28	ARCHERS GLEN	STA. 17+9X6	17' R.	OPEN END GRATE	S.D. - 4.36
I-4	573.47	573.47	568.7K	ARCHERS GLEN	STA. 17+9X6	17' R.	OPEN END GRATE	S.D. - 4.36
I-5	575.04	575.04	570.04	ARCHERS GLEN	STA. 13+72.00	16' L.	OPEN END GRATE	S.D. - 4.36
I-6	575.04	575.04	570.04	ARCHERS GLEN	STA. 13+72.00	16' R.	OPEN END GRATE	S.D. - 4.36
I-7	580.07	574.98	574.01	ARCHERS GLEN	STA. 1+60+59	16' L.	OPEN END GRATE	S.D. - 4.36
I-8	580.07	574.98	574.01	ARCHERS GLEN	STA. 1+60+59	16' R.	OPEN END GRATE	S.D. - 4.36
M-1	550.00	550.00	553.50	ARCHERS GLEN	STA. 20+34	232' L.	STD. MANHOLE	G - 5.11
M-2	570.00	567.92	567.00	ARCHERS GLEN	STA. 17+18	15' L.	STD. MANHOLE	G - 5.11
M-3	577.92	568.5X	568.28	ARCHERS GLEN	STA. 16+28	14' L.	STD. MANHOLE	G - 5.11
M-4	576.50	572.79	572.54	ARCHERS GLEN	STA. 4+17	253' L.	STD. MANHOLE	G - 5.11
M-5	580.00	576.99	576.00	ARCHERS GLEN	STA. 4+18	16.5' L.	STD. MANHOLE	G - 5.11
M-6	556.30	552.28	552.00	-----	N 607791 E 1322594.05	-----	STD. MANHOLE	G - 5.11
R-1	552.00	553.00	552.00	-----	N 607791 E 1322594.05	-----	CONCRETE RISER	-----
S-1	555.00	553.00	553.00	-----	N 607791 E 1322594.05	-----	HDPE END SECTION	A.D.S. FLARED END SECTION
S-2	575.00	572.99	571.98	-----	N 607791 E 1322594.05	-----	HDPE END SECTION	A.D.S. FLARED END SECTION
S-3	554.50	552.00	552.00	-----	N 607791 E 1322594.05	-----	CONC. END SECTION	S.D. - 5.51
S-4	575.00	572.99	572.00	ARCHERS GLEN	STA. 3+93	46' L.	HDPE END SECTION	A.D.S. FLARED END SECTION
S-5	575.00	572.99	572.00	ARCHERS GLEN	STA. 3+93	29' R.	HDPE END SECTION	A.D.S. FLARED END SECTION
S-6	580.00	580.00	580.00	OLD FREDERICK ROAD	STA. 3+78	28' L.	METAL END SECTION	S.D. - 5.51

A.D.S. - ADVANCED DRAINAGE SYSTEMS
LONDON, OHIO
1-800-733-9554
* DENOTES THROAT ELEVATION

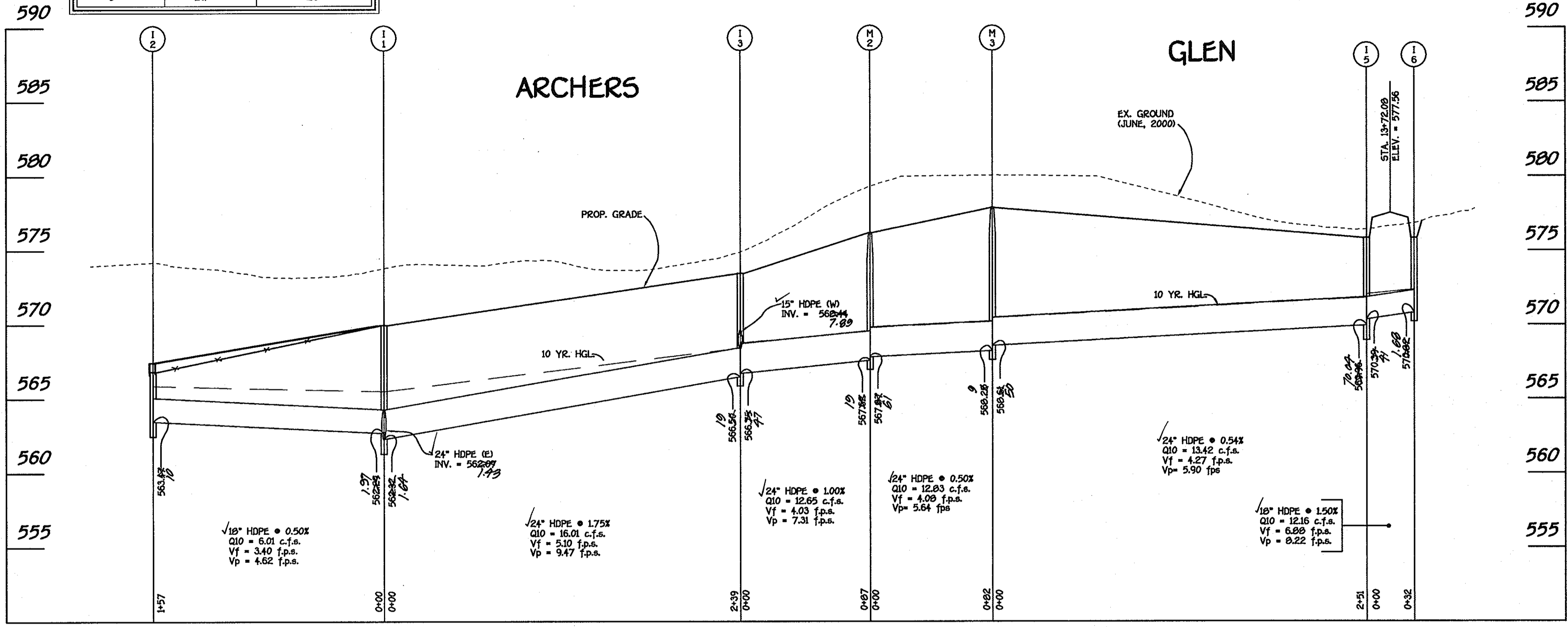
PIPE SCHEDULE

SIZE	CLASS	LENGTH
15"	HDPE	32'
18"	HDPE	295'
24"	HDPE	1319'
18"	CMP	12'
30"	RCCP	79'
6"	DIP	23'

APPROVED: DEPARTMENT OF PUBLIC WORKS
William T. Mahan 8-27-03
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/9/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Damman 9/5/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

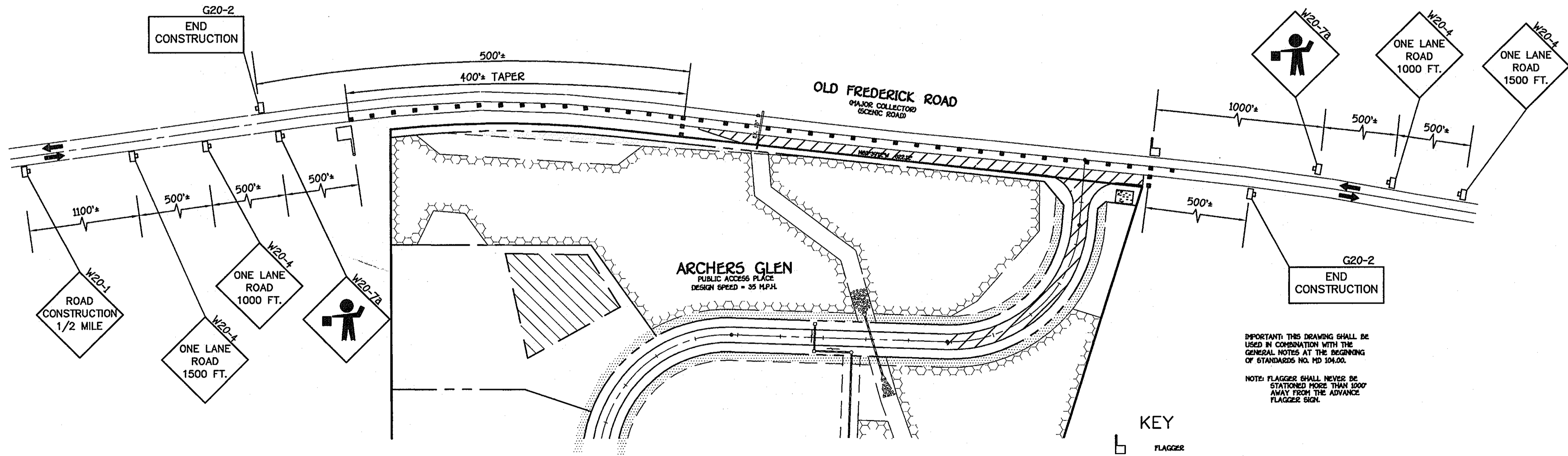


PROFILE

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

MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS

- GENERAL**
- THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE TO TRAFFIC WITHIN WORK AREAS, AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
 - PROPER TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPER APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
 - THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TCP SHALL BE IMPLIED TO INCLUDE ANY COMBINATION OF TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
 - THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 1988 EDITION, ESPECIALLY PART VII AND TO SECTION 814 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JANUARY, 1982), INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
 - THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FORTH IN THE TCP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUESTS TO MAKE MINOR CHANGES TO THE TCP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
 - NO WORK SHALL BEGIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TCP FOR THAT ACTIVITY OR PHASE ARE COMPLETELY AND CORRECTLY IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.
 - GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSE A POTENTIAL HAZARD TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER. NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
 - THE CONTRACTOR AND/OR PERMITTEE SHALL PROVIDE, MAINTAIN IN NEW CONDITION, AND REMOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
 - ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TCP SHALL BE KEPT IN GOOD CONDITION, FULLY PERFORMING AS SET FORTH IN THE TCP, THE MUTCD, AND/OR SECTION 814 OF THE SPECIFICATIONS. FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSUMED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTIVE CAPABILITY OF AT LEAST 60% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST 50% OF THE VISIBLE REFLECTIVE SURFACE.
 - ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
 - THROUGHOUT THE PERIODS OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP. IN LIEU OF THE TCP PREPARED FOR THIS PROJECT, AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP, WHOLLY OR IN PART, OF HIS OWN DESIGN, FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATION. A TCP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TCP'S MAY BE IMPLEMENTED WITHIN A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TCP'S JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
 - THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
 - TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANES OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TCP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.



TEMPORARY TRAFFIC CONTROL PLAN

NO SCALE

- KEY**
- FLAGGER
 - DIRECTION OF TRAFFIC
 - SIGN SUPPORT
 - FACE OF SIGN
 - CHANNELIZING DEVICES
 - WORK SITE

IMPORTANT: THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE GENERAL NOTES AT THE BEGINNING OF STANDARD NO. MD 104.00.
NOTE: FLAGGERS SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLAGGER SIGN.



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
10722 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
4101 491 - 2095

NO.	REVISION	DATE
1	REVISE SHEET NO.	10-27-03



OWNER
ARNOLD M. SEWELL
13000 OLD FREDERICK ROAD
SYKESVILLE, MARYLAND 21784

DEVELOPER
VIKING DEVELOPMENT CORPORATION
5850 OLD WASHINGTON ROAD
SYKESVILLE, MARYLAND 21784



STORM DRAIN PROFILES AND TRAFFIC CONTROL PLAN
ARCHERS GLEN
LOTS 6 THRU 22 AND PRESERVATION PARCELS 'A' THRU 'C'
ZONED: RC-DEO
TAX MAP NO. 9, PARCEL NO. 301, GRID NO. 22
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JUNE 9, 2003
SHEET 9 OF 18

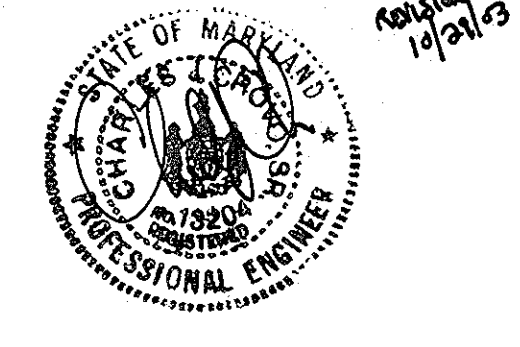
AS-BUILT 3-24-06

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 8-27-07 DATE

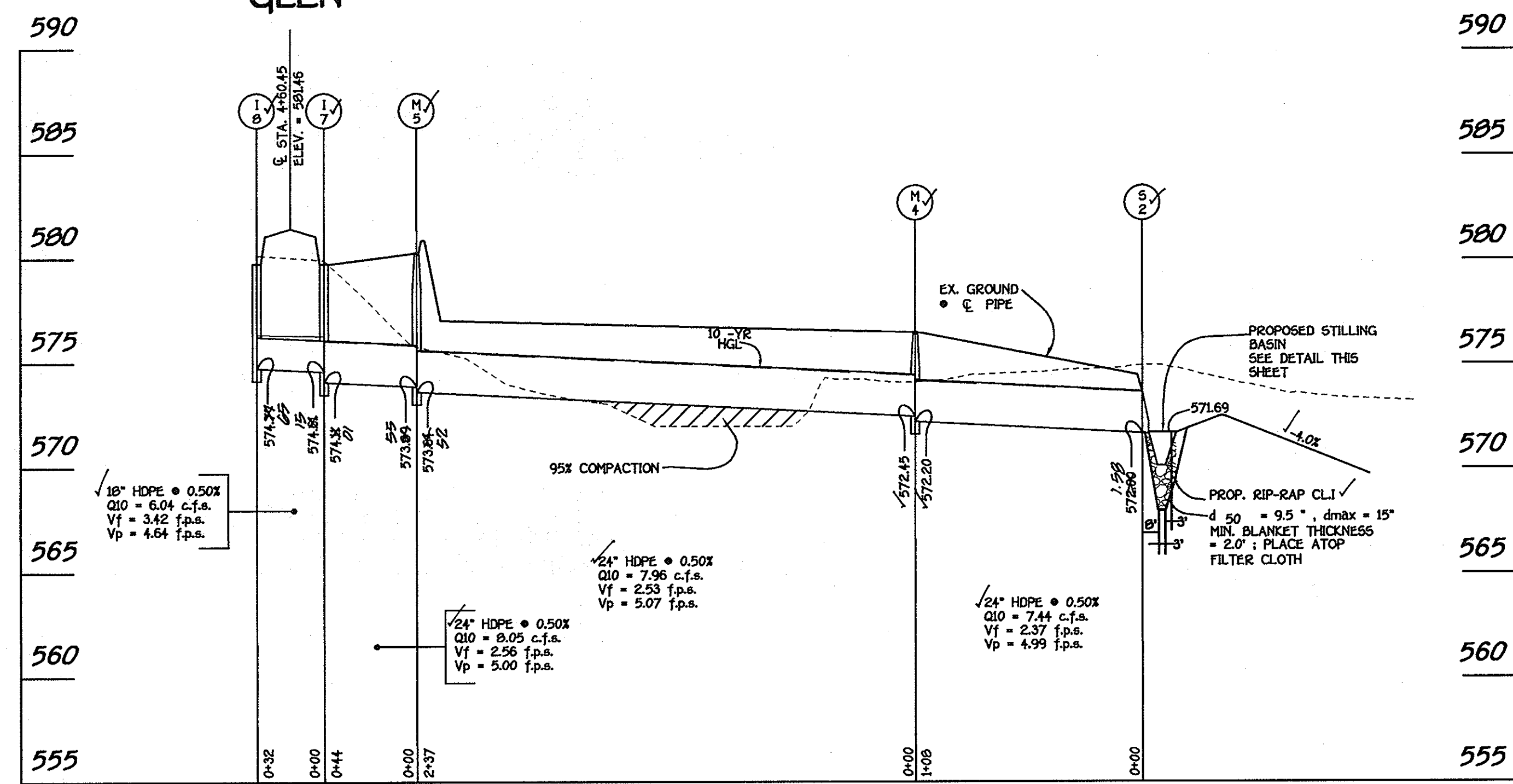
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 9/29/08 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Development Engineering Division
 9/5/08 DATE

NO.	REVISIONS	DESCRIPTION	DATE
1	REVISION	REVISION	10-29-03

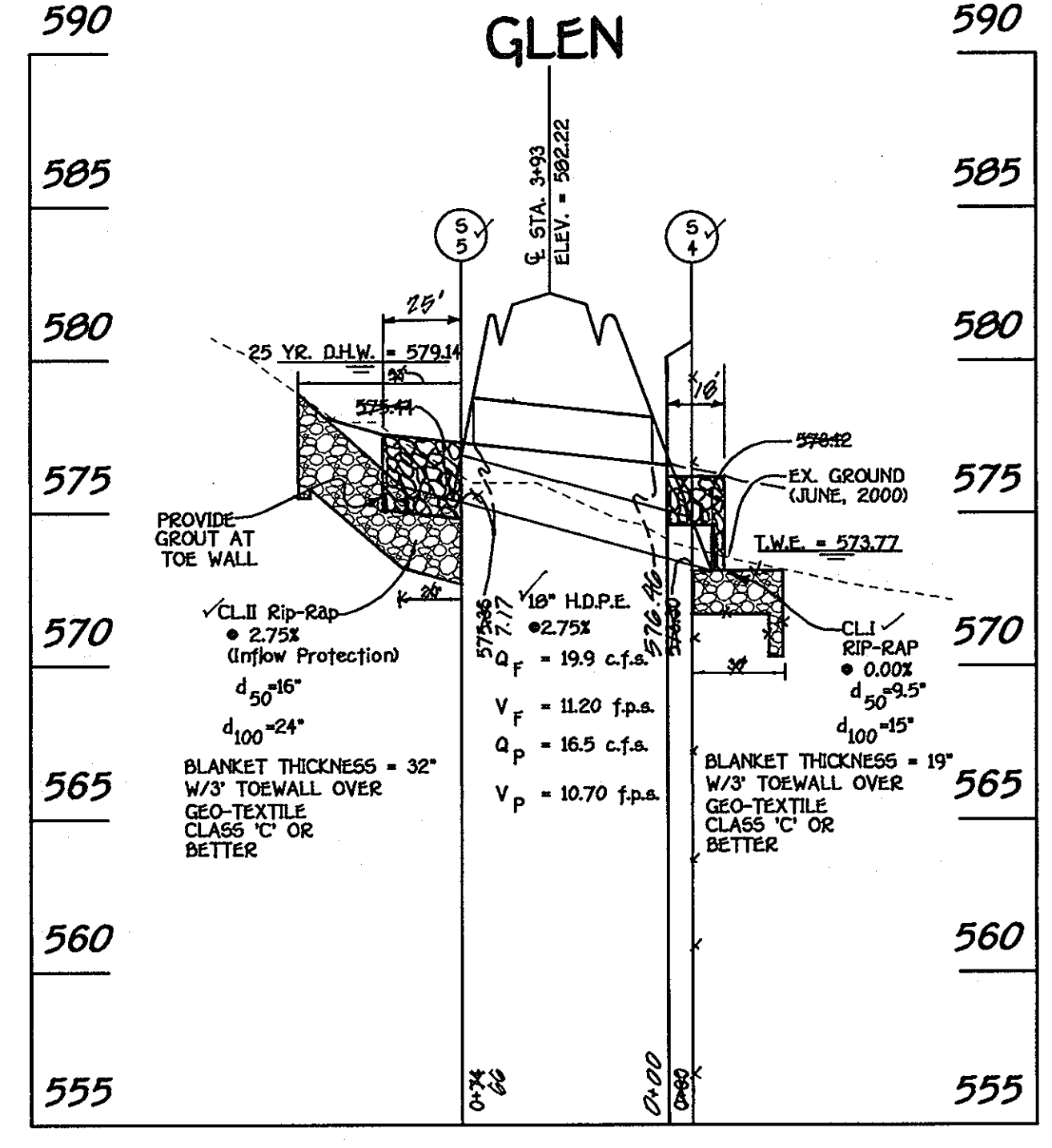


ARCHERS GLEN

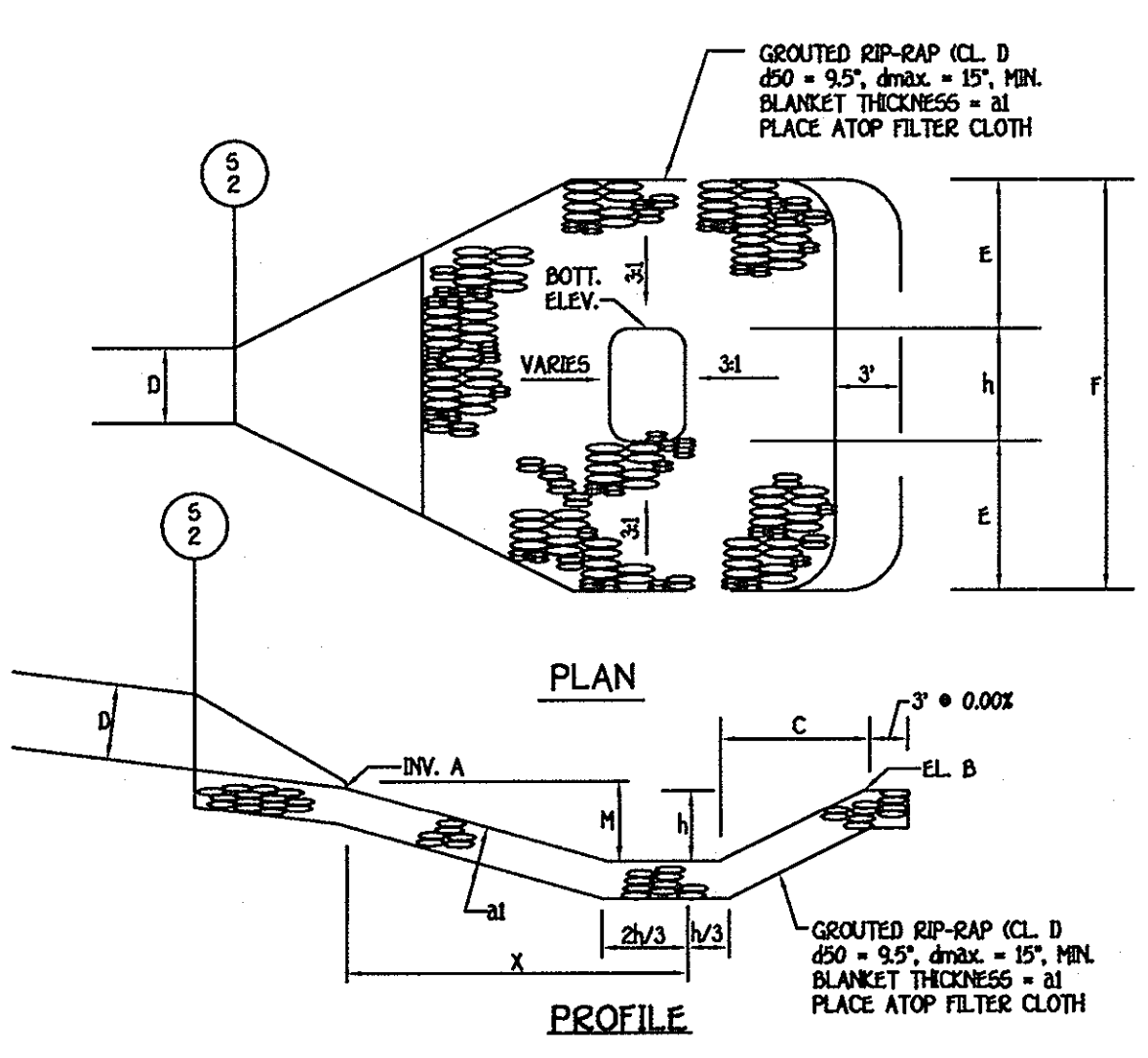


PROFILE
 SCALE: HORIZ. : 1" = 50'
 VERT. : 1" = 5'

ARCHERS GLEN

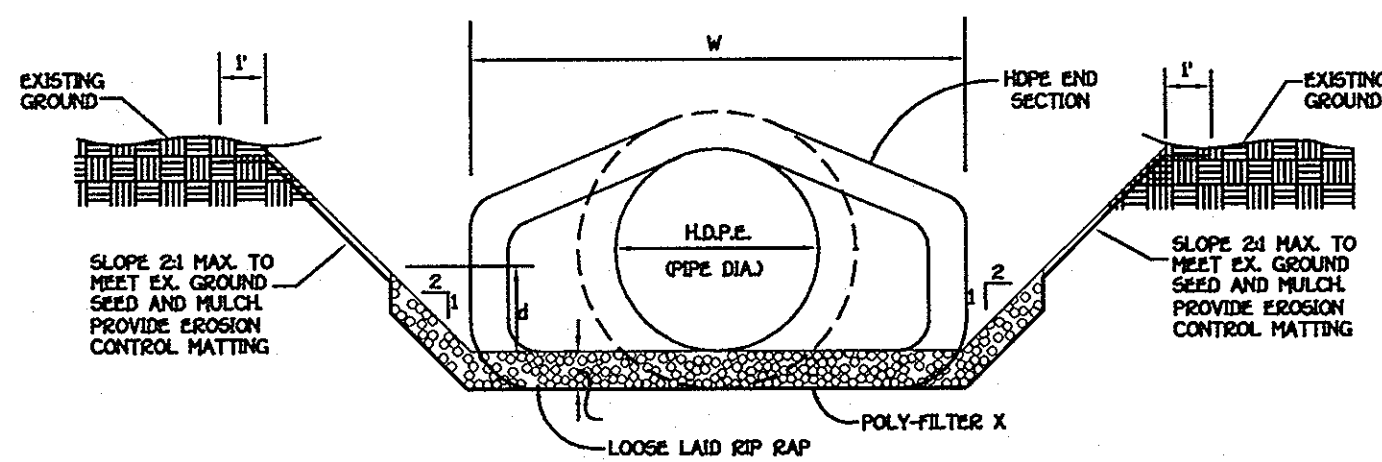


PROFILE
 SCALE: HORIZ. : 1" = 50'
 VERT. : 1" = 5'



TYP. STILLING BASIN OUTFALL DETAIL
 NO SCALE

STILLING BASIN DATA										
STRUCTURE NO.	INV.	EL.	C	D	E	F	h	M	al	X
G-2	428.50	427.50	3.0'	1.5'	3.0'	7.0'	3.0	1.50'	2.0'	8.0'



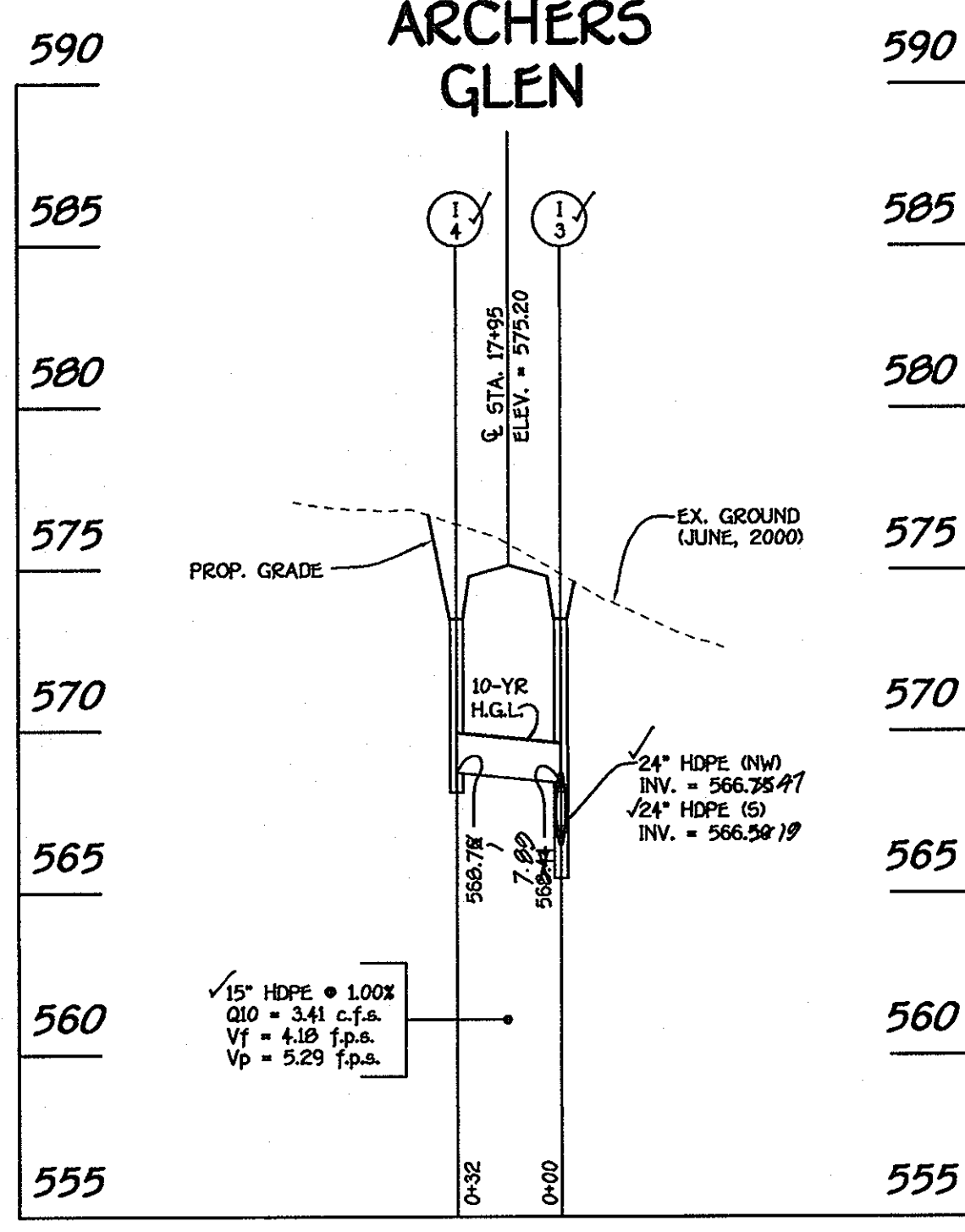
✓ RIP RAP CHANNEL DETAIL
 NO SCALE

RIP-RAP CHANNEL DESIGN DATA															
STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	N	V ₁₀ (f.p.s.)	Q ₁₀ (c.f.s.)	RIP-RAP SIZE	BLANKET THICKNESS	PIPE DIA.	REMARKS
✓S-1	47.13	21.69	2.1729	1.6820	0.0050	.0707	4.0'	3.96'	0.04	5.72	20.77	9.5"	19"	24"	FOREBAY ENTRANCE
✓S-2	21.97	15.01	1.4637	1.2908	.0050	.0707	4.0'	2.46'	0.04	4.27	7.44	9.5"	15"	24"	STILLING BASIN
✓S-3	48.03	22.21	2.1625	1.6768	.0050	.0707	6.0'	3.63'	0.04	5.67	21.10	9.5"	15"	30"	POND OUTFALL
✓S-4	39.60	19.83	1.9970	1.5895	.0050	.0707	3.0'	3.78'	0.04	5.48	16.50	9.5"	15"	19"	AT ARCHERS GLEN
✓S-5	20.96	14.51	1.4445	1.2794	.0275	0.1656	3.0'	2.57'	0.04	5.37	16.50	18"	24"	32"	INFLOW PROTECTION OLD FREDRICK ROAD EXTENSION
✓S-6	14.40	7.41	1.4433	1.5607	.0400	0.2000	3.0'	0.62'	0.04	5.29	14.4	9.5"	15"	19"	

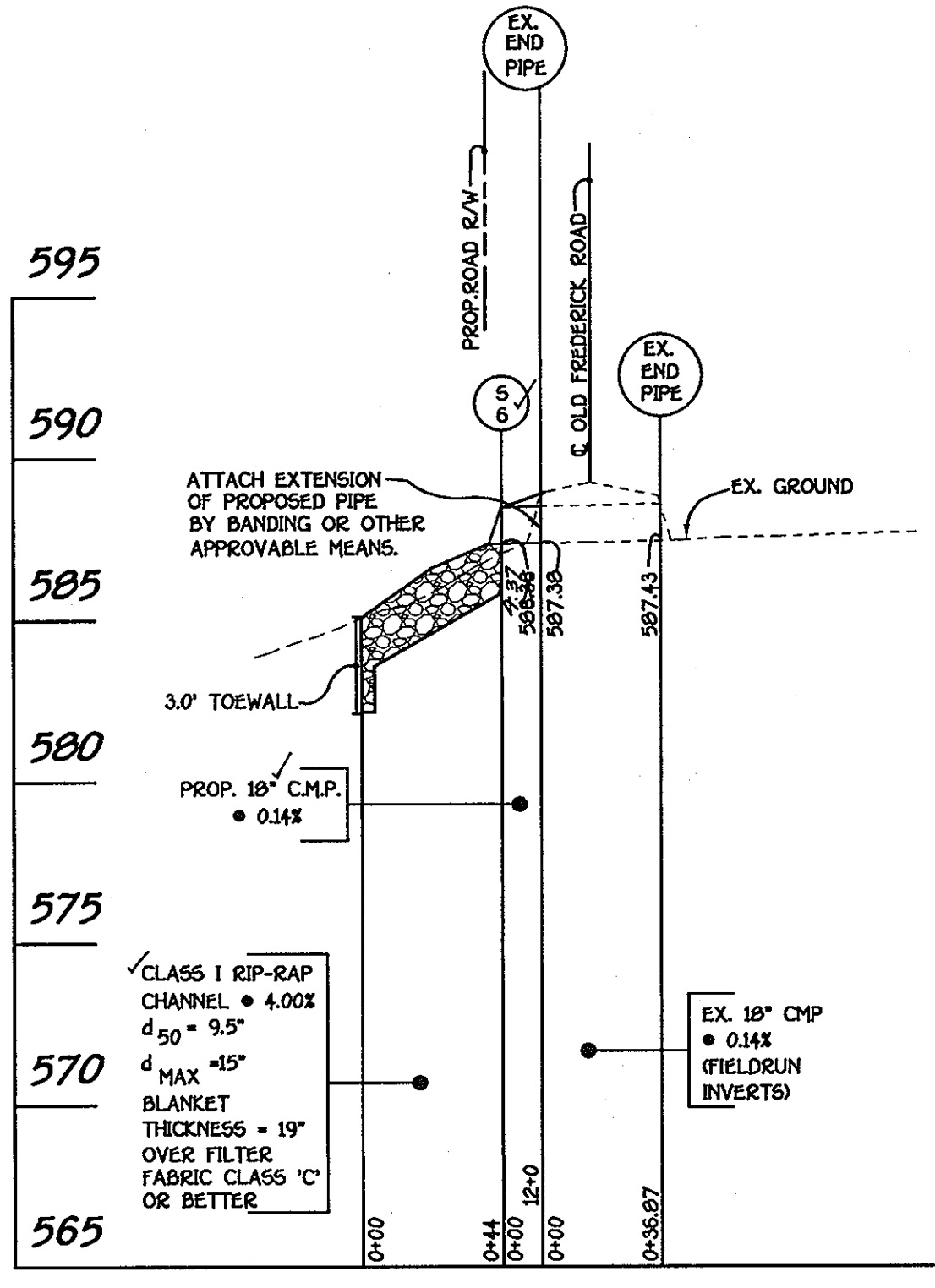
CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from puncturing, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stones for the riprap or gabion outfalls may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stones for riprap or gabion outfalls shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent work.

ARCHERS GLEN

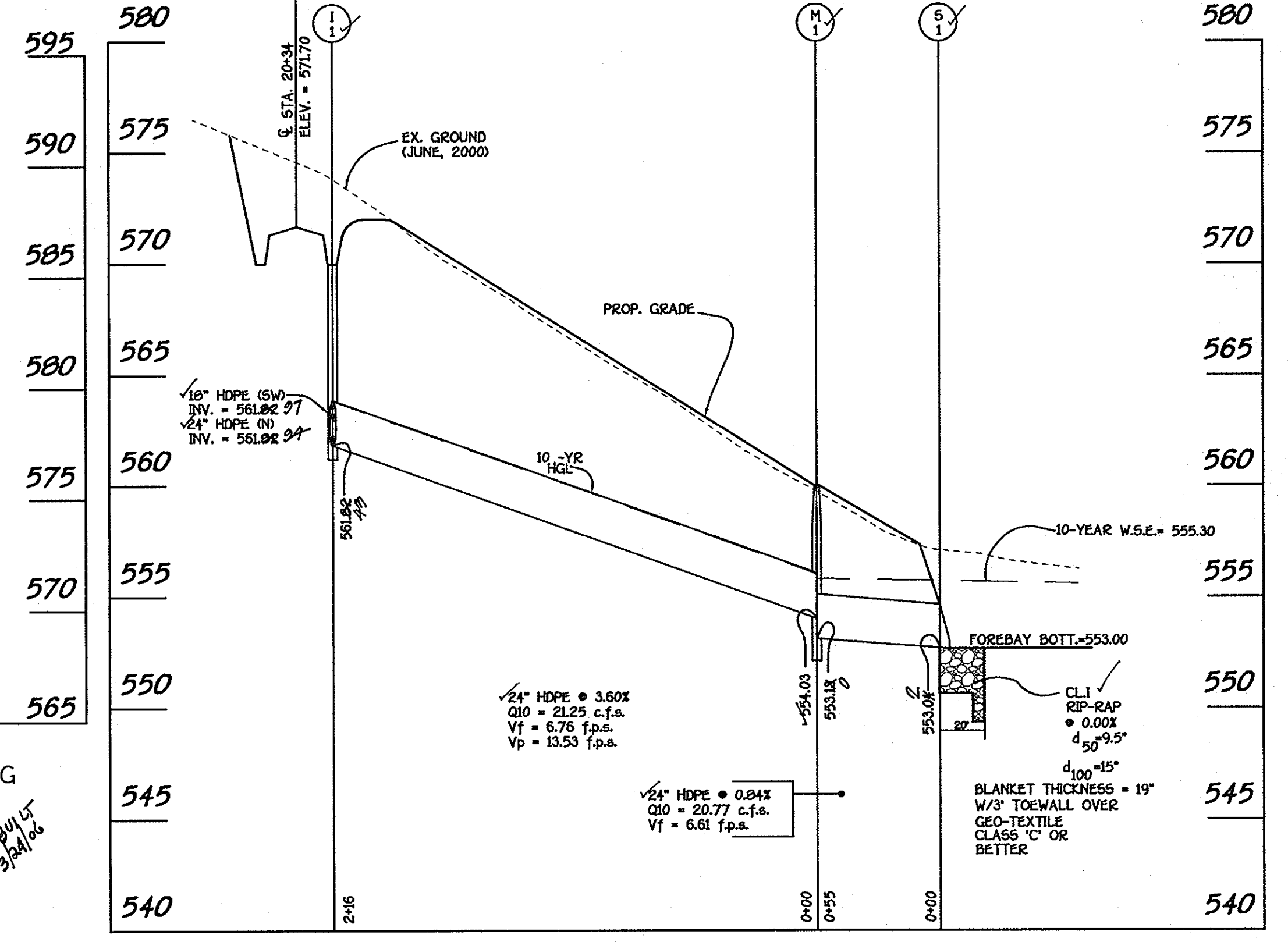


PROFILE
 SCALE: HORIZ. : 1" = 50'
 VERT. : 1" = 5'



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

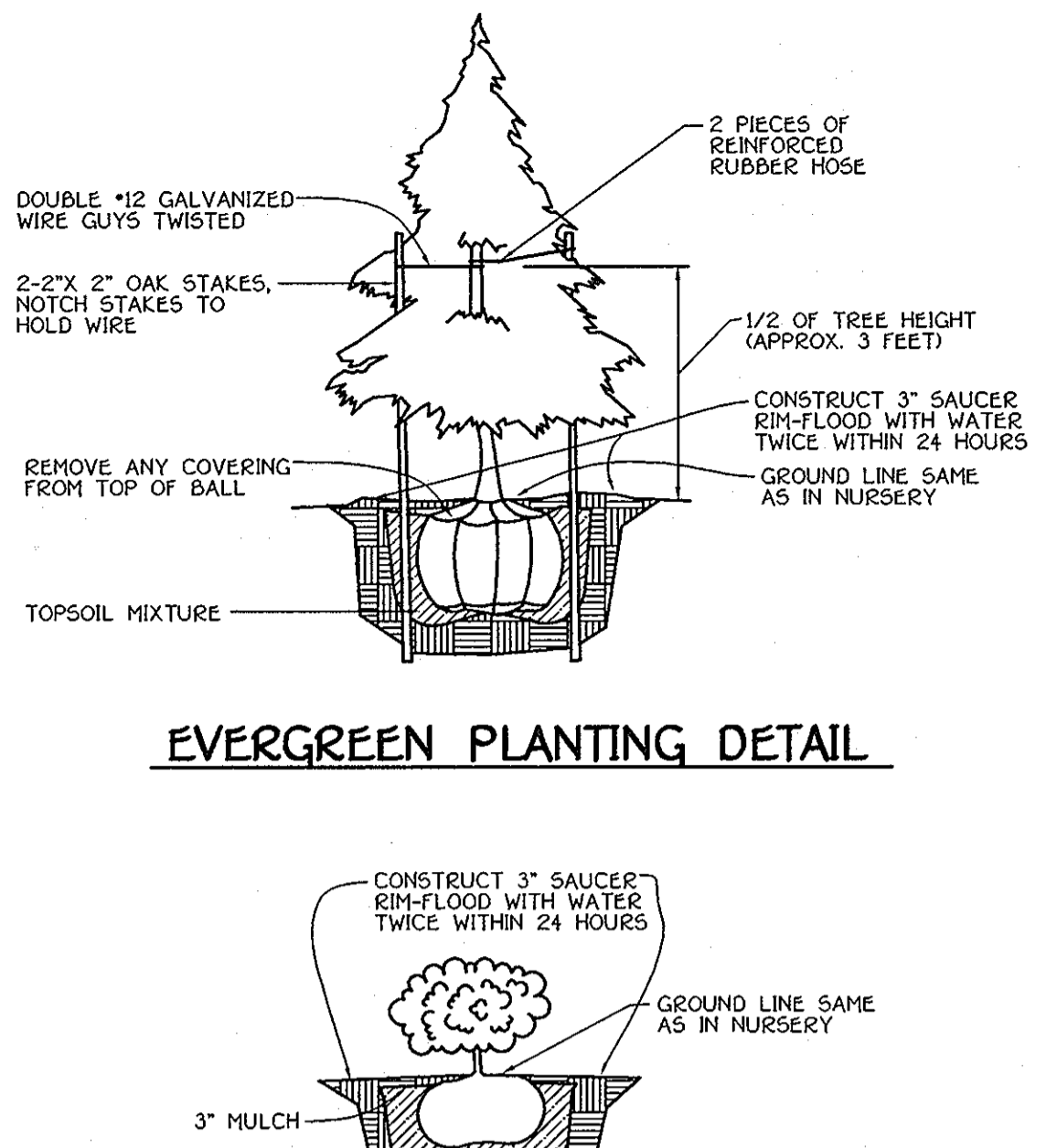
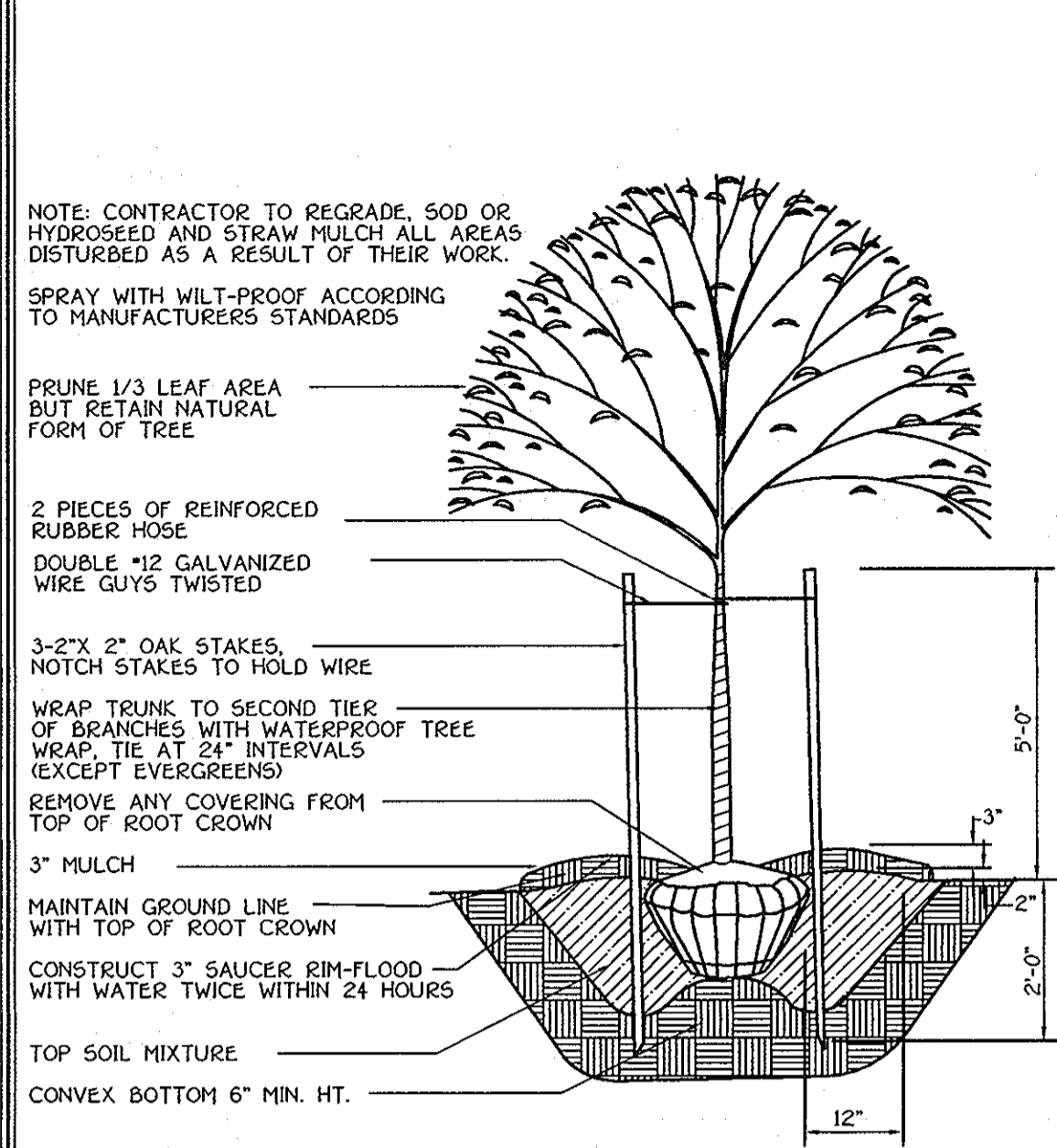
ARCHERS GLEN



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

STORM DRAIN PROFILES
ARCHERS GLEN
 LOTS 6 THRU 22 AND
 PRESERVATION PARCELS 'A' THRU 'C'

ZONED RC-DEO
 TAX MAP No. 9, PARCEL No. 301, GRID No. 22
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 9, 2003
 SHEET 10 OF 18



EVERGREEN PLANTING DETAIL

SHRUB PLANTING DETAIL

TREE PLANTING DETAIL

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug, no heated-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", hereinafter "Landscape Guidelines" approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all amendments.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be based on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications.

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence.

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope).

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

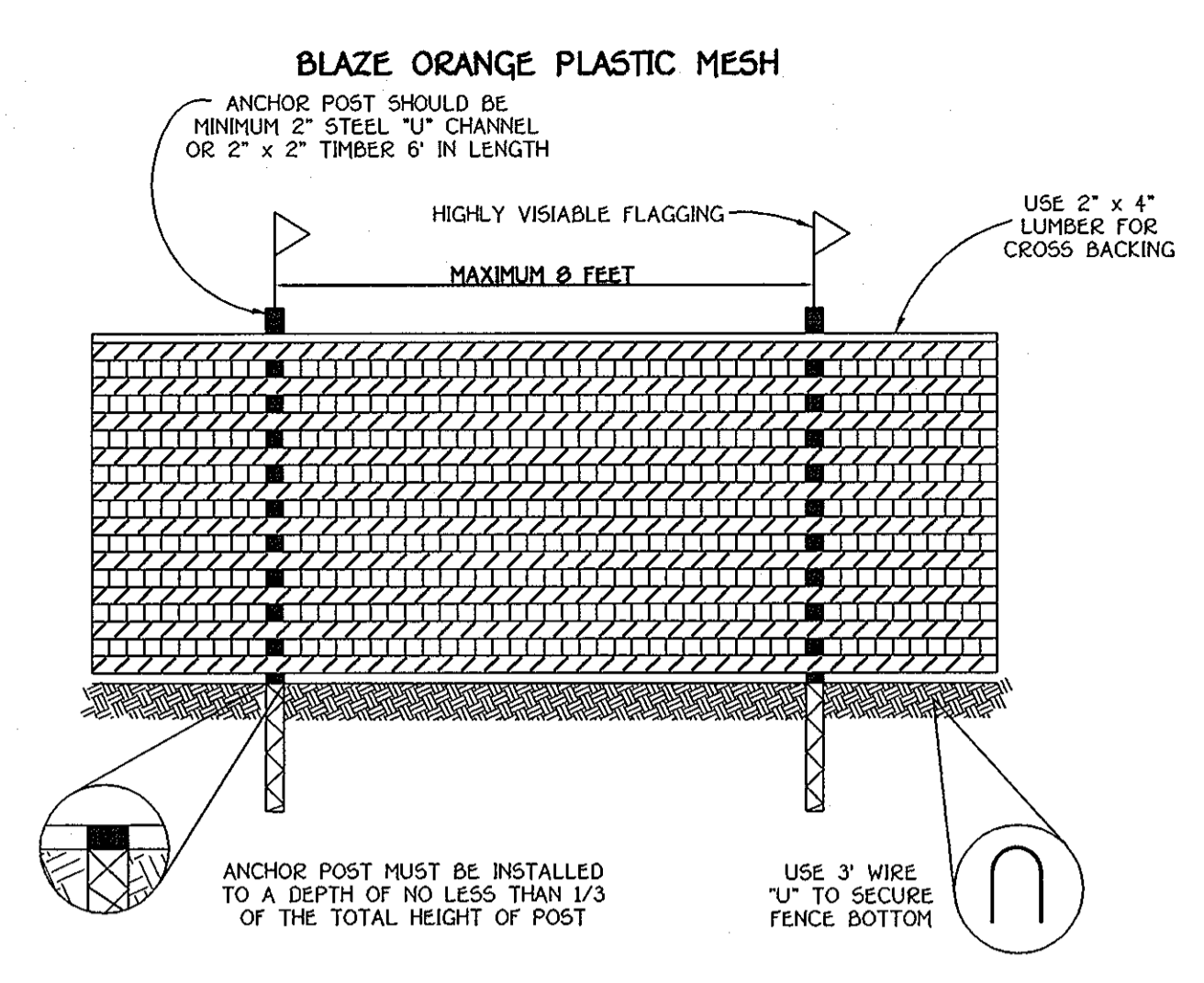
Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

TREE PLANTING DETAIL

NOT TO SCALE

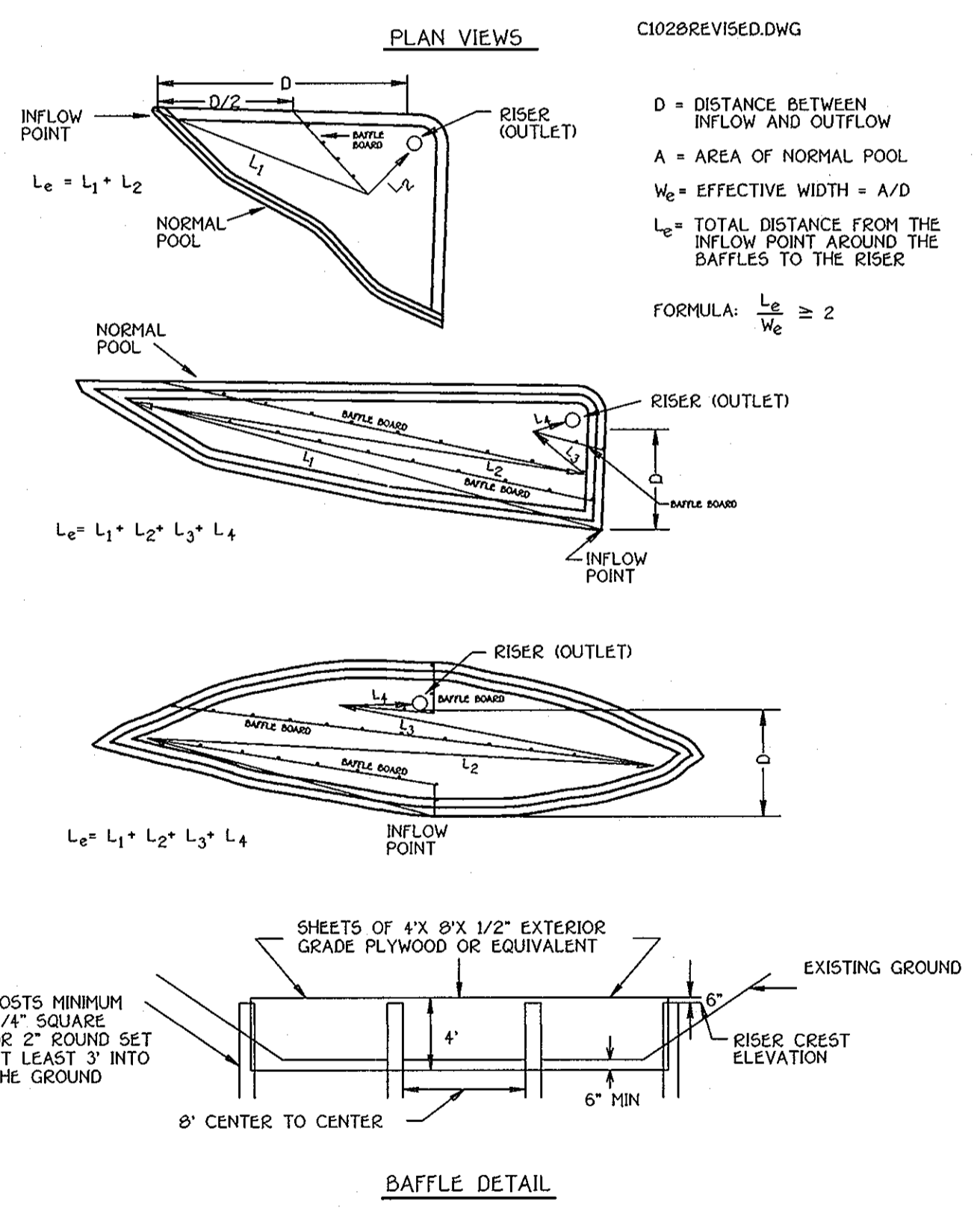


- NOTES:
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 4. ROOT DAMAGE SHOULD BE AVOIDED.
 5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION DETAIL

NOT TO SCALE

SEDIMENT BASIN BAFFLES



EROSION CONTROL MATTING

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT.
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24 HOURS BEFORE STARTING WORK.
3. INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE PLANS (2 DAYS). CLEAR AND GRUB FOR THE EXCAVATION OF SEDIMENT BASIN/POND EMBANKMENT. WHERE NECESSARY, RIPPING AND JACK HAMMERING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITY. (2 WEEKS)
4. RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. INSTALL ANY REMAINING SEDIMENT CONTROL MEASURES. (1 WEEK)
5. RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. CONSTRUCT STORM DRAIN SYSTEMS. INSTALL I-1 THROUGH I-5 DO NOT BLOCK INLETS I-1 THRU I-8 AS STORM DRAIN SYSTEM WILL BE USED TO CONVEY SEDIMENT TO BASIN. (1 WEEK)
6. RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. CLEAR AND GRUB THE REMAINDER OF THE SITE. (3 DAYS)
7. GRADE SITE TO THE PROPOSED SUB-GRADE AND INSTALL THE STORM DRAIN SYSTEMS. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING. (2 WEEKS)
8. GRADE ALONG OLD FREDERICK ROAD FOR APPROPRIATE ROAD IMPROVEMENTS. RELOCATE ANY UTILITY POLES IF NECESSARY. EXTEND EXISTING CULVERT UNDER OLD FREDERICK ROAD TO MEET WITH THE NEWLY GRADED ROADSIDE DITCH. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING WITH PERMISSION FROM THE INSPECTOR. (2 WEEKS)
9. CONSTRUCT ROAD BASE COURSE FOR INTERNAL SUBDIVISION ROAD. SAW CUT OLD FREDERICK ROAD AND INSTALL PAVING SECTION PER APPROPRIATE IMPROVEMENTS. (30 DAYS)
10. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND THE POND HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL DESIGN GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 WEEKS)
11. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE POND WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE APPROVED TRAPPING DEVICE.

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.

Chad Collins 8/18/03
Signature of Engineer Date

DEVELOPER'S CERTIFICATE

I/We 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.

Nicolas Cole 8/15/03
Signature of Developer Date

Reviewed For Howard County Soil Conservation District and Meets Technical Requirements.

Joe Brown 8/25/03
U.S.D.A. - Natural Resources Conservation Service Date

Approved: This Development is Approved For Erosion and Sediment Control by The Howard Soil Conservation District.

John De 8/25/03
District Howard Soil Conservation Dist. Date

Approved: Department of Planning and Zoning

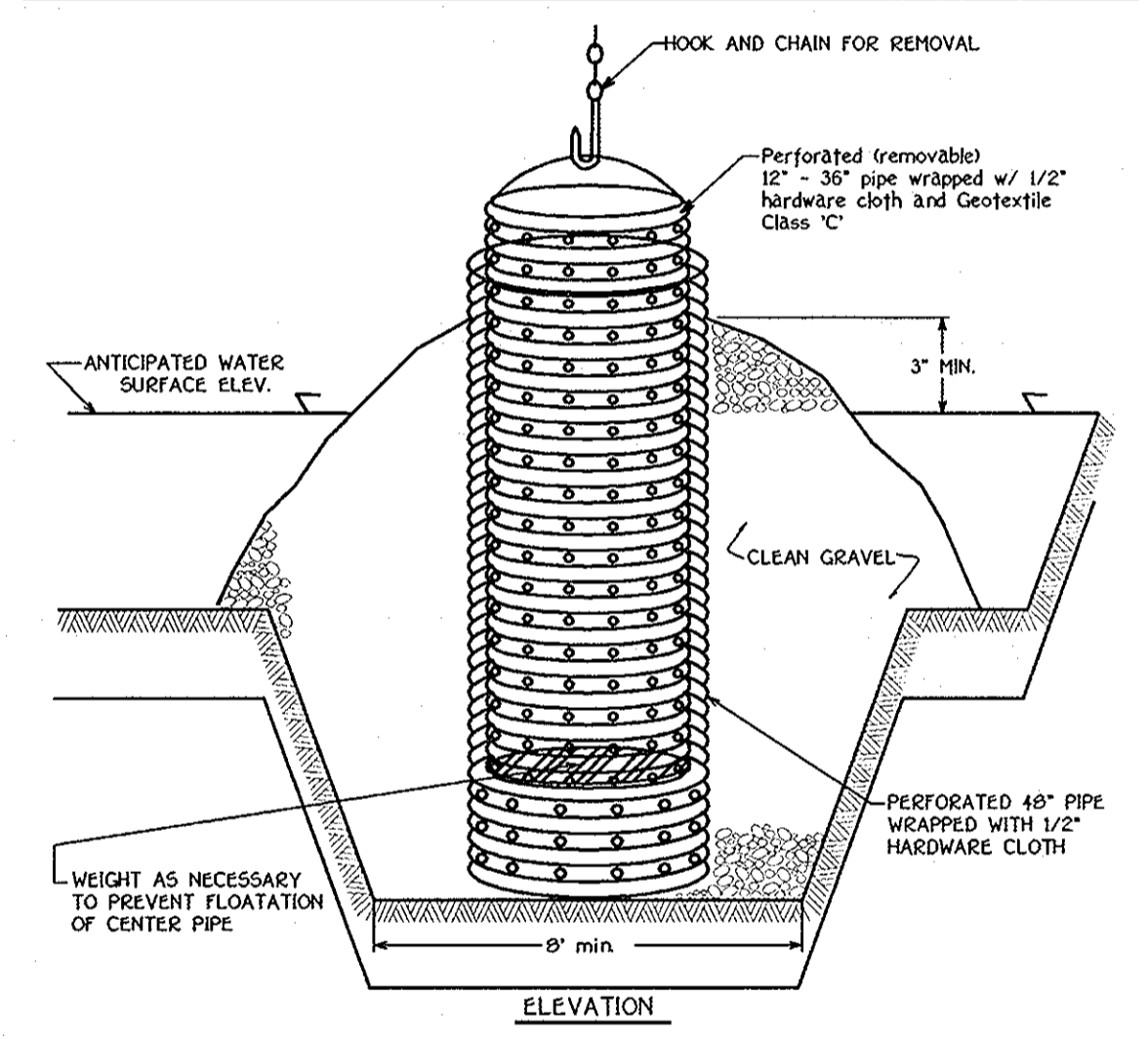
Chris Hamilton 9/21/03
Chief, Division of Land Development Date

Chad Collins 9/15/03
Chief, Development Engineering Division Date

Approved: Howard County Department of Public Works

William T. White 8-27-03
Chief, Bureau of Highways Date

REMOVABLE PUMPING STATION



- Construction Specifications
1. The outer pipe should be 40" dia. or shall in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slots or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
 4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.



SEDIMENT AND EROSION CONTROL NOTES & DETAILS

ARCHERS GLEN

LOTS 6 THRU 22 AND PRESERVATION PARCELS 'A' THRU 'C'

ZONED: RC-DEO

TAX MAP No. 9, PARCEL No. 301, GRID No. 22

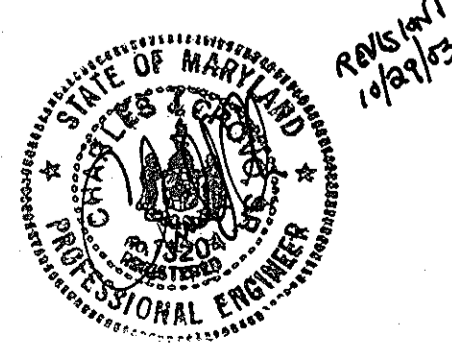
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DATE: JUNE 9, 2003

SHEET 12 OF 18 F 03-70

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CONTINENTAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL Fwy
ELLSWORTH CITY, MARYLAND 21042
410-461-2895

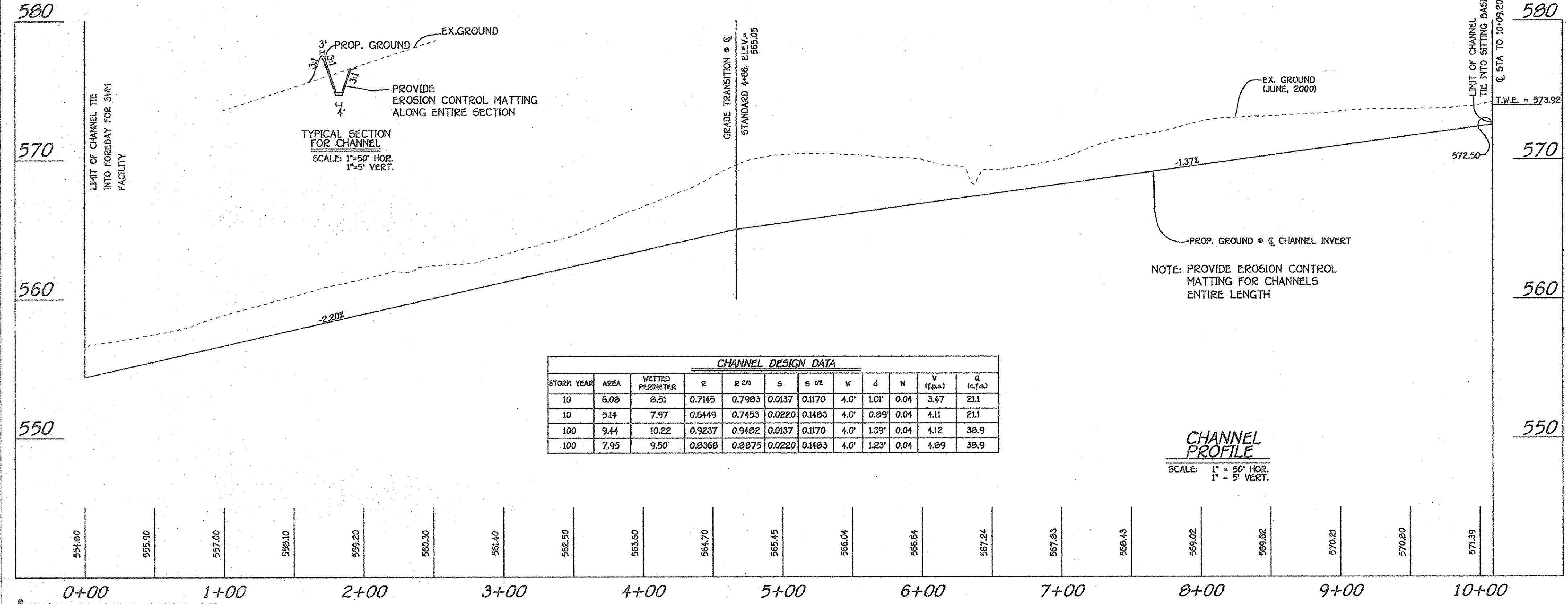
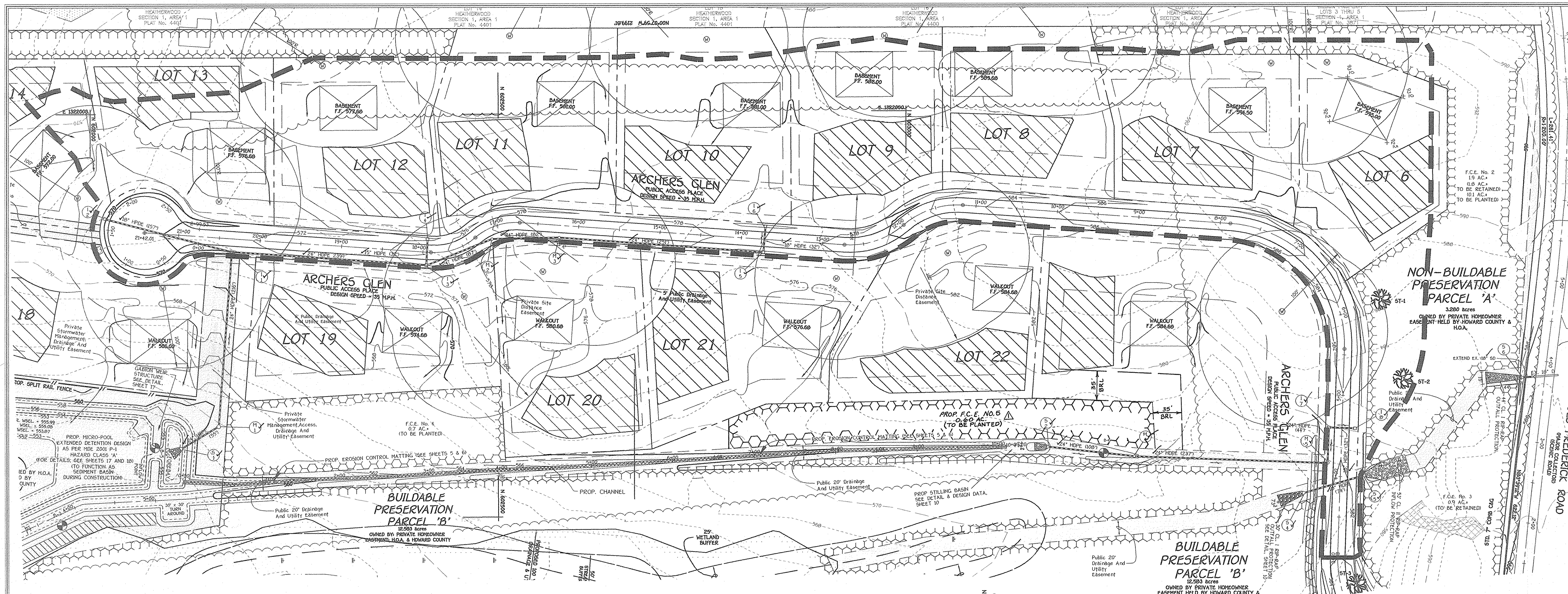


NO.	REVISE SHEET NO.	DATE
	REVISION	10-29-03

OWNER
ARNOLD M. SEWELL
13000 OLD FREDERICK ROAD
SYKESVILLE, MARYLAND 21794

DEVELOPER
VIKING DEVELOPMENT CORPORATION
5650 OLD WASHINGTON ROAD
SYKESVILLE, MARYLAND 21794

AS-BUILT 9-24-06



CHANNEL DESIGN DATA

STORM YEAR	AREA	WETTED PERCENT	R	R ^{2/3}	S	S ^{1/2}	V	Q	N	V (f.p.s.)	Q (c.f.s.)
10	6.08	8.51	0.7145	0.7983	0.0137	0.1170	4.0'	1.01'	0.04	3.47	21.1
10	5.14	7.97	0.6449	0.7453	0.0220	0.1483	4.0'	0.89'	0.04	4.11	21.1
100	9.44	10.22	0.9237	0.9482	0.0137	0.1170	4.0'	1.39'	0.04	4.12	38.9
100	7.95	9.50	0.8368	0.8875	0.0220	0.1483	4.0'	1.23'	0.04	4.89	38.9

DESIGN DATA

STATION	10 - YEAR Q	DEPTH	100-YEAR Q	DEPTH	SLOPE	V 10 f.p.s.	V 100 f.p.s.
0+00 to 4+66	18.40 c.f.s.	0.97'	33.60 c.f.s.	1.34'	1.37%	3.18	3.26
4+66 to 10+95	18.40 c.f.s.	0.43'	33.6 c.f.s.	0.61'	2.20%	8.73	10.57

Tc PATH DATA

AREA	SEG. ID	LENGTH	FLOW TYPE & DESCRIPTION	N	SLOPE	VELOCITY	TRAVEL TIME
A	A - B	100'	Overland Flow Short Grasses	0.15	2.00%	-----	0.18
	B - C	100'	Shallow Con. Flow - Unpaved	N/A	8.50%	4.70	0.01
	C - D	340'	Channel Flow	0.06	1.47%	1.80	0.05
	D - E	425'	Storm Drain Flow	0.013	Varies	5.50Avg.	0.02
	E - F	1035'	Channel Flow	0.06	1.74%	3.10	0.09
TOTAL							0.35

APPROVED: DEPARTMENT OF PUBLIC WORKS
William T. ...
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 8-27-03

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Craig Hamblin
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/29/03

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION
Chris ...
 DATE: 9/5/03

CHANNEL PROFILE AND DRAINAGE MAP
ARCHERS GLEN
 LOTS 6 THRU 22 AND
 PRESERVATION PARCELS 'A' THRU 'C'
 ZONED: RC-DEO
 TAX MAP No. 9, PARCEL No. 301, GRID No. 22
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 9, 2003
 SHEET 14 OF 18

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21117
 4100 461 - 2895

OWNER: ARNOLD H. SEWELL
 13000 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784

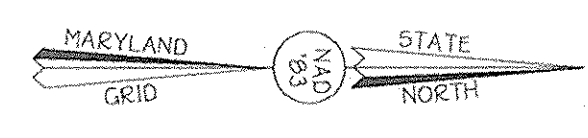
DEVELOPER: VIKING DEVELOPMENT CORPORATION
 5850 OLD WASHINGTON ROAD
 SYKESVILLE, MARYLAND 21784

AS-BUILT 9-24-06

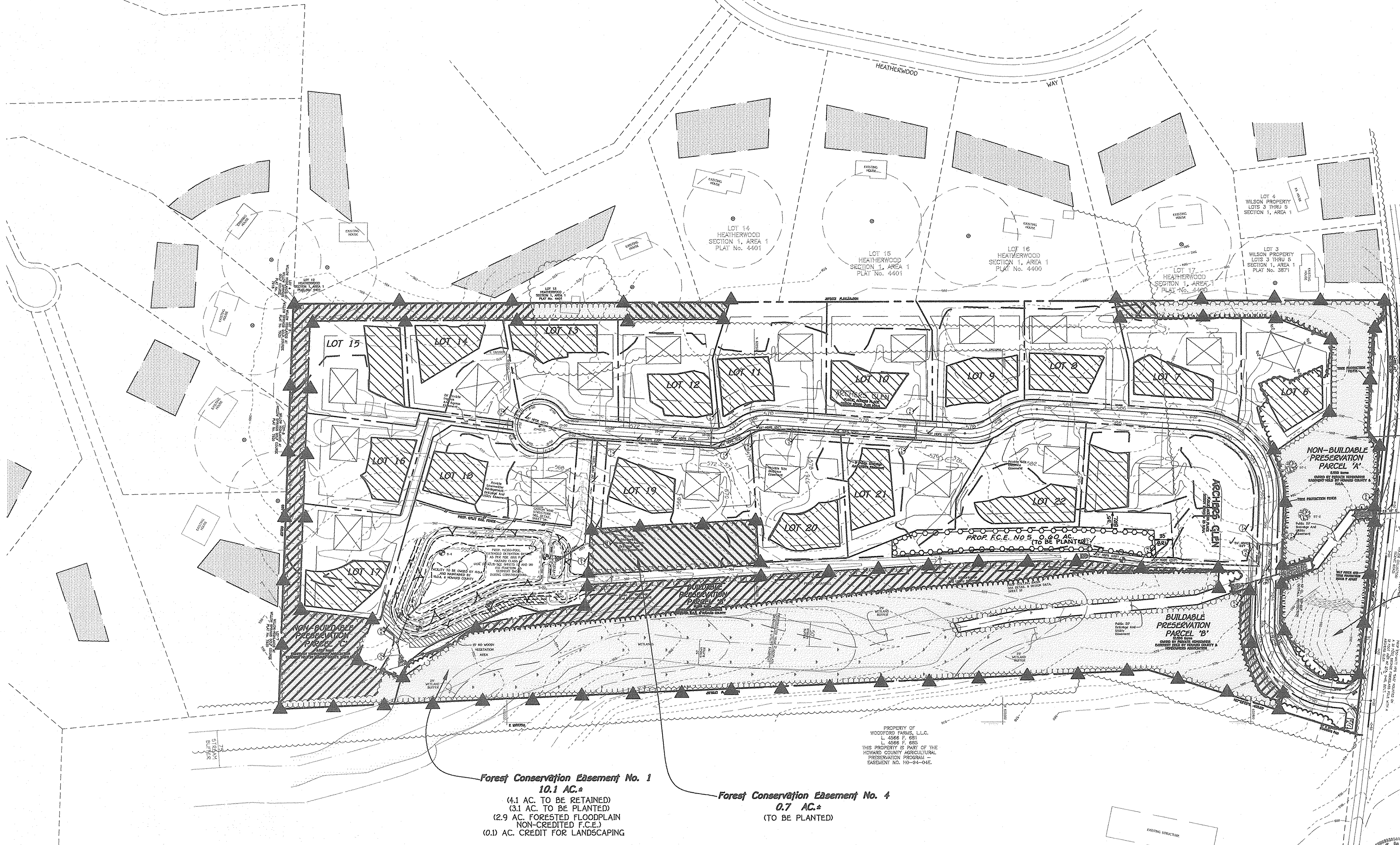
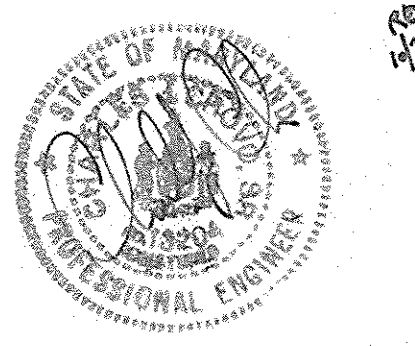
APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 8-27-03 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 9/29/03 DATE

Chief, Development Engineering Division
 9/3/03 DATE



1	ADD F.C.E. NO. 5 AND REVISE SHEET NO.	10-30-03
NO.	REVISION	DATE



Forest Conservation Easement No. 2
 1.9 AC.±
 (1.8 AC.± TO BE RETAINED)
 (0.1 AC.± TO BE PLANTED)

Forest Conservation Easement No. 3
 0.9 AC.±
 (TO BE RETAINED)

Forest Conservation Easement No. 1
 10.1 AC.±
 (4.1 AC. TO BE RETAINED)
 (3.1 AC. TO BE PLANTED)
 (2.9 AC. FORESTED FLOODPLAIN
 NON-CREDITED F.C.E.)
 (0.1) AC. CREDIT FOR LANDSCAPING

Forest Conservation Easement No. 4
 0.7 AC.±
 (TO BE PLANTED)

- LEGEND**
- Forest to be Retained
 - Ex. Specimen Tree
 - Limits of Forest Conservation Easement
 - Forestation Area
 - Protective Signage
 - Protective Fencing (temporary)

PROPERTY OF
 WOODFORD FARMS, L.L.C.
 L. 4566 F. 691
 L. 4066 F. 693
 THIS PROPERTY IS PART OF THE
 HOWARD COUNTY AGRICULTURAL
 PRESERVATION PROGRAM -
 EASEMENT NO. 10-24-04E.



FOREST CONSERVATION PLAN
ARCHERS GLEN
 LOTS 6 THRU 22 AND
 PRESERVATION PARCELS 'A' THRU 'C'

ZONED: RC-DEO
 TAX MAP No. 9, PARCEL No. 301, GRID No. 22
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Scale: 1" = 100'
 DATE: JUNE 9, 2003
 SHEET 15 OF 18

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CONTINENTAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 481-2899

Eco-Science
 Professionals, Inc.
 CONSULTING ECOLOGISTS
 P.O. BOX 5006
 GLEN ARM, MD. 21057

MD DNR Qualified Professional
 USACOE Wetland Delinerator
 Certification # WDCP93M0610044B
 8/14/03
 JOHN P. CANOLES

OWNER
 ARNOLD M. SEWELL
 13000 OLD FREDERICK ROAD
 SYKESVILLE, MARYLAND 21784

DEVELOPER
 VIKING DEVELOPMENT CORPORATION
 5950 OLD WASHINGTON ROAD
 SYKESVILLE, MARYLAND 21784

NOTE: THIS IS FOR FOREST CONSERVATION INFORMATION ONLY.

AS-BUILT 3-24-06

Planting Notes:

- 1. Multiflora rose control may be required as part of this planting plan.
2. Bareroot plant material may be used to offset the cost of multiflora rose removal and maintenance.
3. Plants should be flagged to aid on location during maintenance.

Multiflora Rose Control Note

Multiflora rose is prevalent in certain areas to be afforested. Prior to planting all multiflora rose shall be removed. Removal of the rose may be performed with mowing and herbicide treatments.

Planting/Soil Specifications

- 1. Planting of nursery stock shall take place between March 15th and April 30th.
2. A twelve (12) inch layer of topsoil shall be spread over all afforestation areas.
3. All bareroot planting stock shall have their root systems dipped into an anti-desiccant gel prior to planting.

Sequence of Construction

- 1. Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
2. Upon completion of the planting, signage shall be installed as per the Forest Retention Area Protection Devices shown on Sheet 2 of the Forest Conservation Plan.

Maintenance of Plantings

- 1. Maintenance of plantings shall last for a period of 24 months.
2. All plant material shall be watered twice a month during the first growing season.
3. Invasive exotics and noxious weeds will be removed from reforestation areas.

Guarantee Requirements

- 1. After one growing season, plant material shall be maintained at 90% survival threshold.
2. The contractor will not be liable for plant loss due to theft or vandalism.

Surety for Reforestation

- 1. The developer shall post a surety (bond, letter of credit) to ensure that reforestation plantings are completed.

Planting Schedule

FCE Planting Area 1 (3.1 acres)

Table with 4 columns: Qty., Species, Size, Spacing. Lists tree species like Acer rubrum, Fraxinus pennsylvanica, and Liriodendron tulipifera.

Planting Schedule

FCE Planting Area 2 (0.1 acres)

Table with 4 columns: Qty., Species, Size, Spacing. Lists tree species like Acer rubrum, Fraxinus pennsylvanica, and Liriodendron tulipifera.

FCE Planting Area 4 (0.7 acres)

Table with 4 columns: Qty., Species, Size, Spacing. Lists tree species like Acer rubrum, Fraxinus pennsylvanica, and Liriodendron tulipifera.

Key: ** Plantings to be spaced on 11 foot centers, plantings should be installed in rows to facilitate future maintenance.

FCE Planting Area 5 (0.6 acres)

Table with 4 columns: QTY., SPECIES, SIZE, SPACING. Lists tree species like ACER RUBRUM - RED MAPLE, FRAXINUS PENNSYLVANICA - GREENASH.

FCE SUMMARY CHART table with columns FCE AREAS, A.C., and RETENTION.

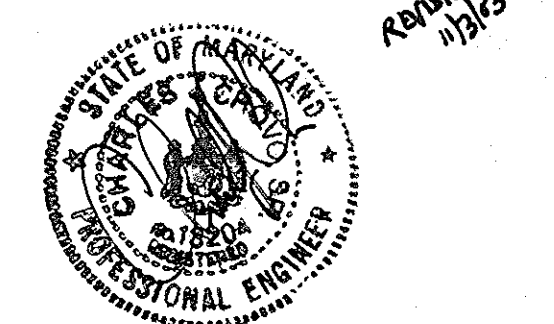
FOREST DATA table with columns and rows for Gross Area, Net Tract Area (NTA), Existing Forest (NTA), etc.

FOREST CONSERVATION NOTES

- 1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County.
2. Forested areas occurring outside of the FCE shall not be considered part of the FCE.

APPROVED: DEPARTMENT OF PUBLIC WORKS. WALTER Z. WALKER JR. CHIEF, BUREAU OF HIGHWAYS. 8-27-03 DATE.

REVISION SHEET NO. 11-3-03. REVISE FCE TO ADD AREA 5 REVISE SURETY AMOUNT. 11-3-03 DATE.



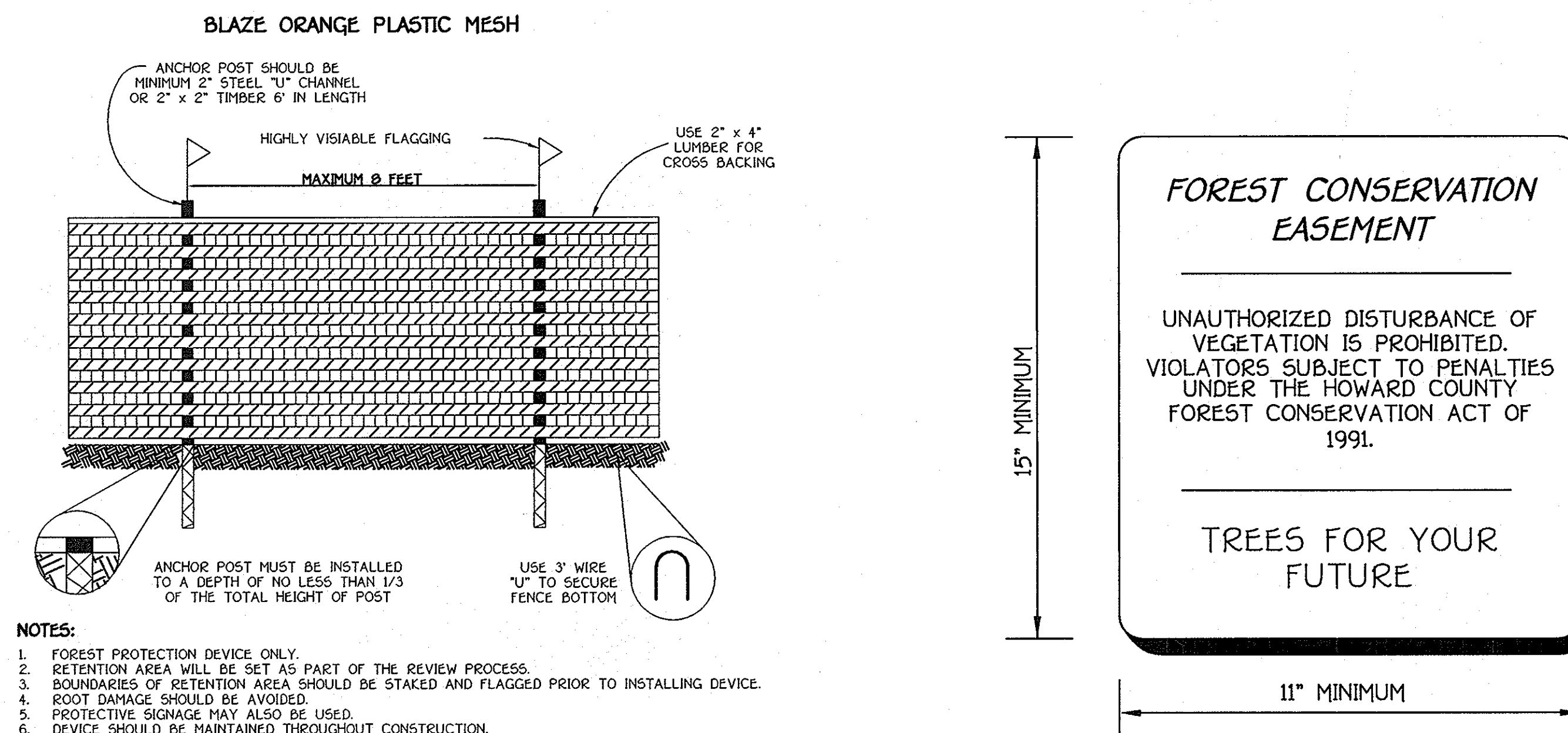
FOREST CONSERVATION WORKSHEET VERSION 1.0

Table for Forest Conservation Worksheet with columns A-T and values for areas and acreages.

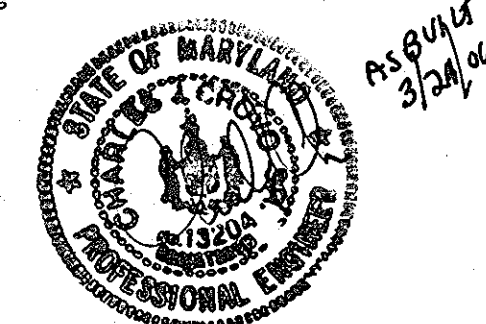
FOREST SURETY NOTES

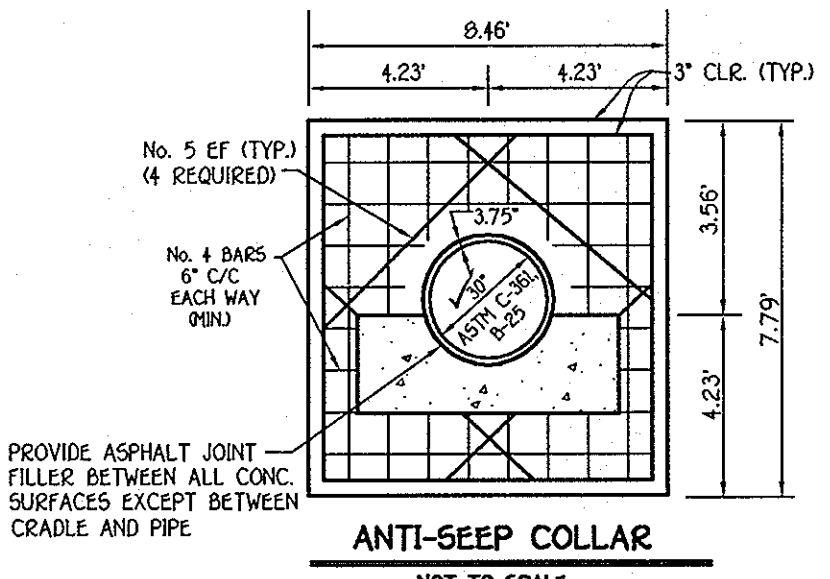
- 1. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 18-1200 OF THE HOWARD COUNTY CODE.
2. THE TOTAL FOREST CONSERVATION SURETY AMOUNT OF \$179,031.60 MINUS A CREDIT OF \$217,000 YIELDS A TOTAL OF \$476,833.60 DOLLARS AND IS POSTED WITH THE DEVELOPER'S AGREEMENT AND IS BASED ON THE FOLLOWING:

FOREST CONSERVATION NOTES & DETAILS ARCHERS GLEN LOTS 6 THRU 22 AND PRESERVATION PARCELS 'A' THRU 'C'.

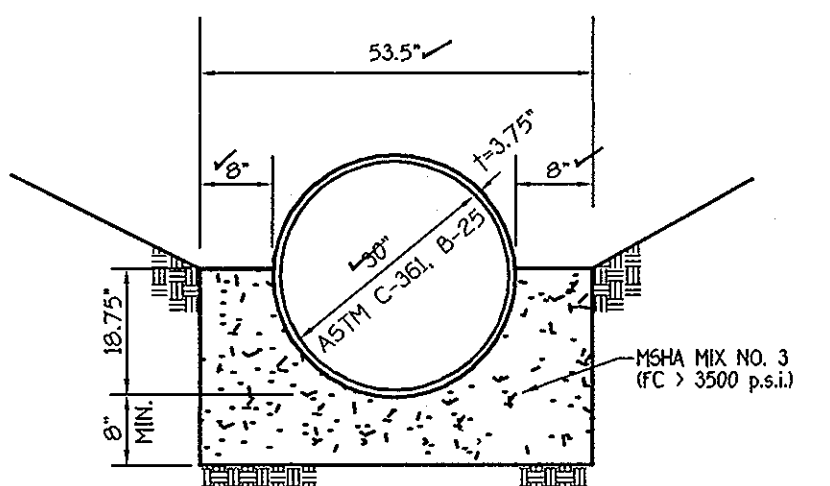
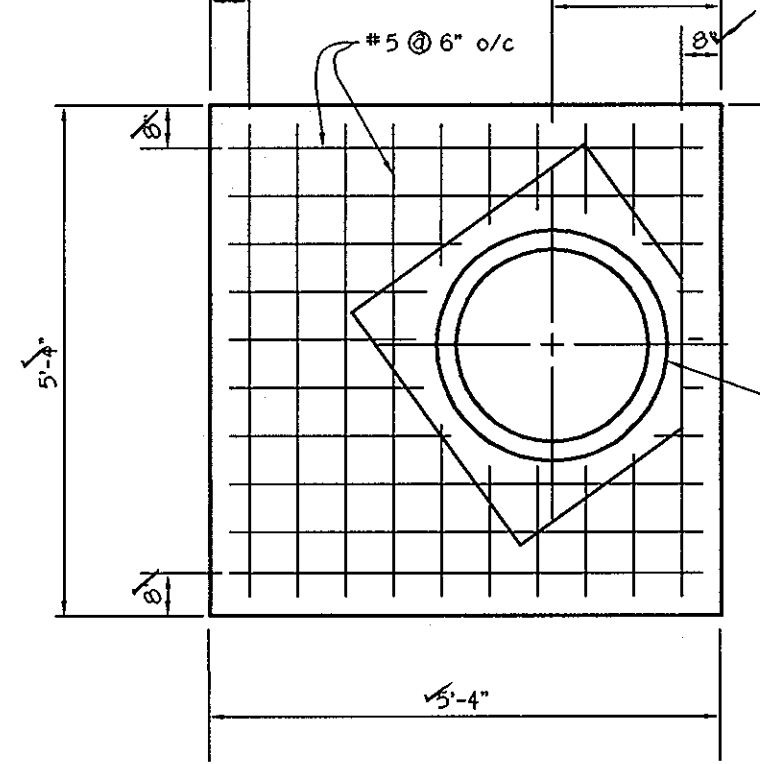
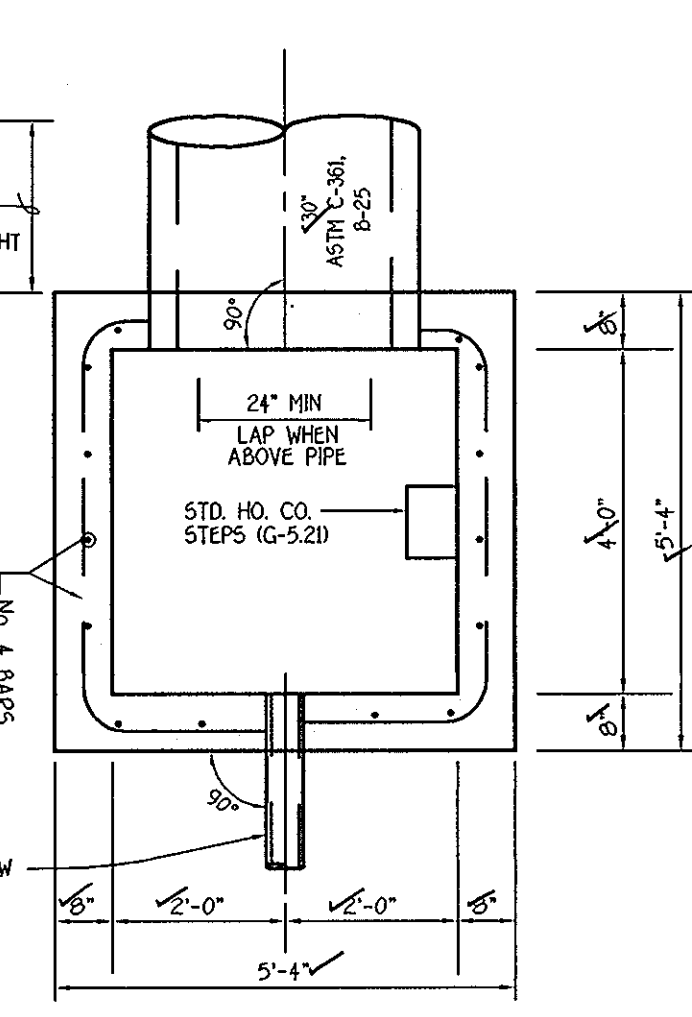
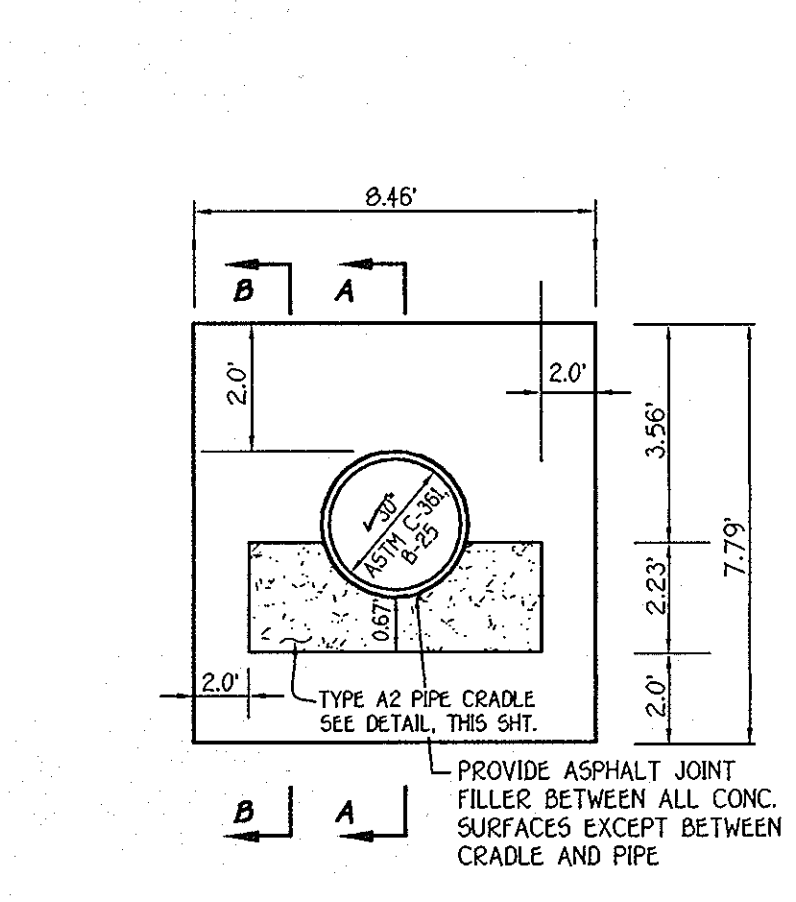


OWNER: ARNOLD M. SEWELL, 13000 OLD FREDERICK ROAD, SYKESVILLE, MARYLAND 21784. DEVELOPER: VIKING DEVELOPMENT CORPORATION, 5850 OLD WASHINGTON ROAD, SYKESVILLE, MARYLAND 21784.





- NOTES:
1. CONCRETE SHALL BE MSHA MIX NO. 3 (FC > 3500 P.S.I.)
 2. REINFORCING STEEL GRADE 60
 3. FOR WALLS OF STRUCTURE SHALL UTILIZE L.M. SCOTFIELD CO. T-9055 FORM LINERS (RANDOM SPLIT-FACE ROCK) OPTIONAL
 4. PROVIDE ROUGH BROOK FINISH
 5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECS.
 6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.



By the Developer:
 I/We Certify That All 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 Shall Engage A Registered Professional Engineer To Supervise Pond Construction And 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.

Vincent R. Coleraine 8/5/03
 Signature of Developer
VINCENT R. COLERAINES
 Printed Name of Developer

By the Engineer:
 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/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Charles J. Crovo, Sr. 8/18/03
 Signature of Engineer
CHARLES J. CROVO, SR.
 Printed Name of Engineer

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Jia Li 8/25/03
 Signature of Engineer
USDA-NATURAL RESOURCES CONSERVATION SERVICE
 Printed Name of Engineer

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

William R. Winkler 8/27/03
 Signature of Engineer
HOWARD SOIL CONSERVATION DISTRICT
 Printed Name of Engineer

Approved Department Of Planning And Zoning

Cindy Hermita 9/29/03
 Signature of Engineer
CHIEF, DIVISION OF LAND DEVELOPMENT
 Printed Name of Engineer

Approved Department Of Public Works

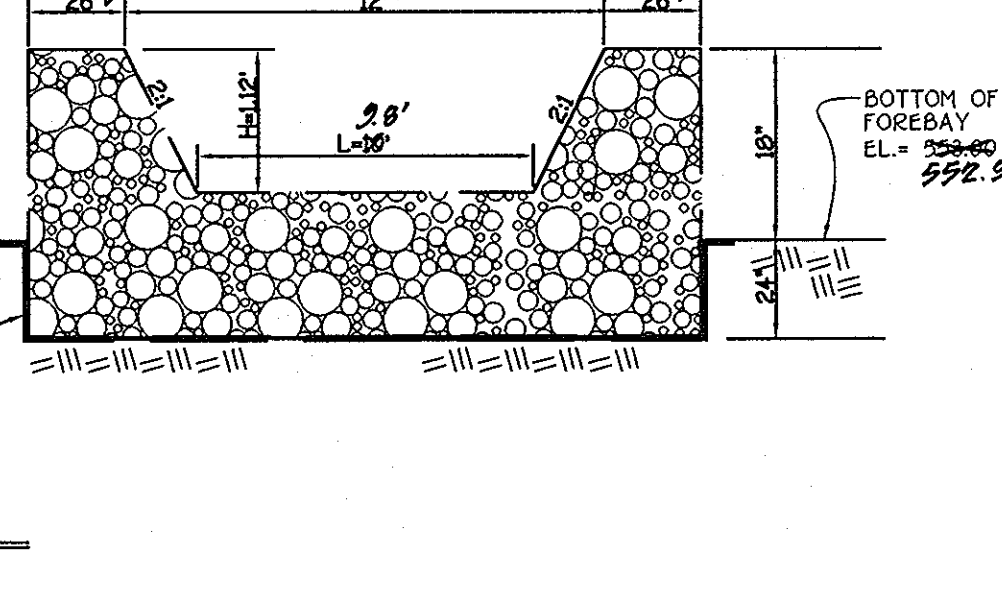
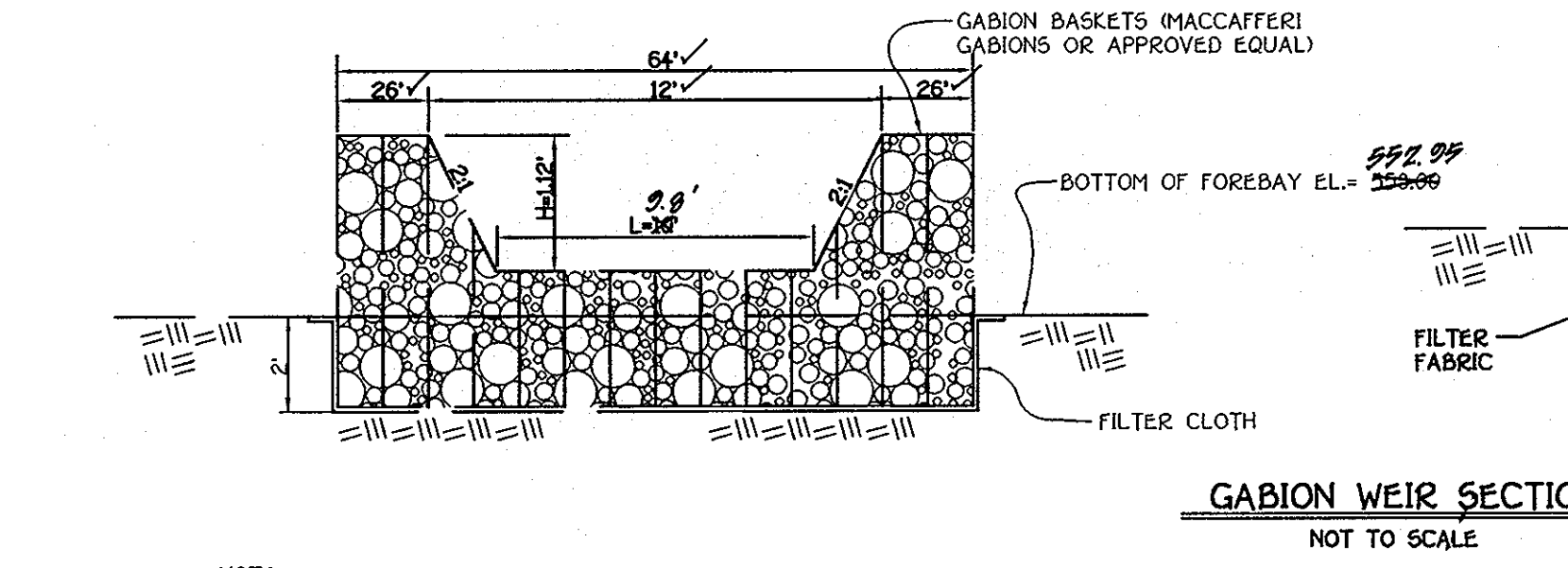
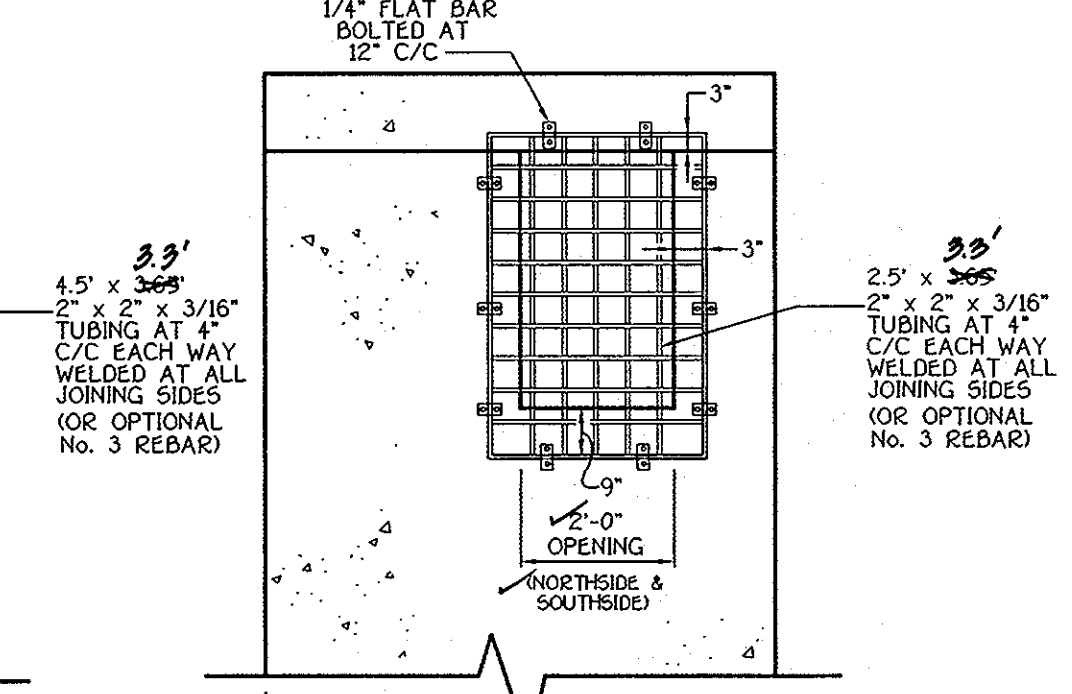
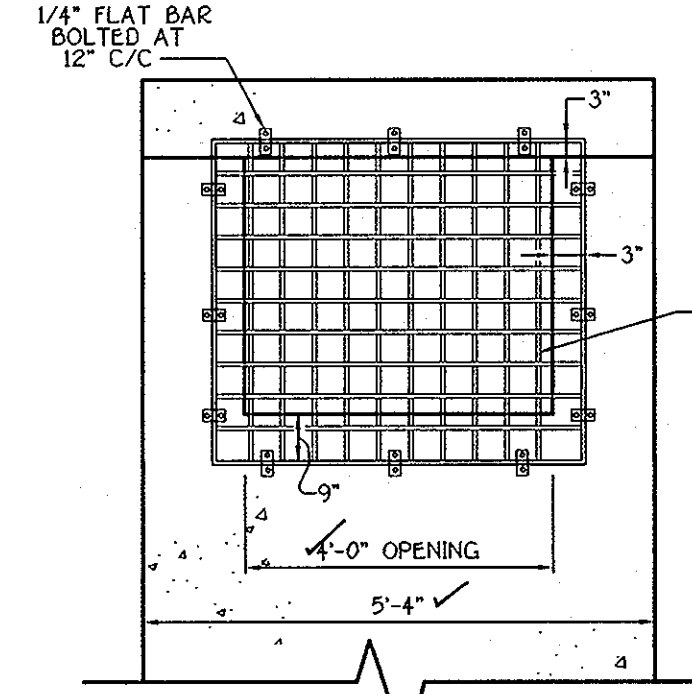
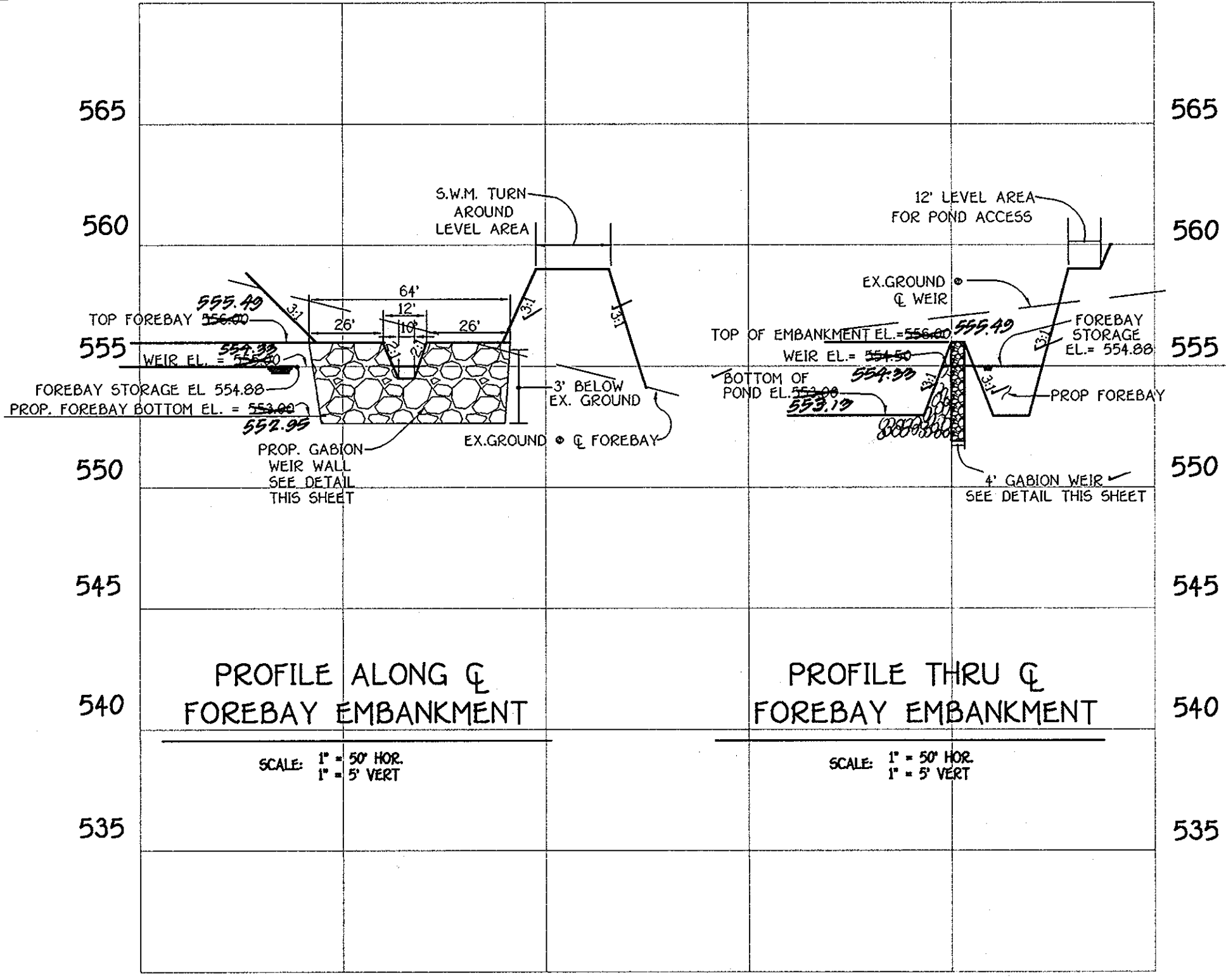
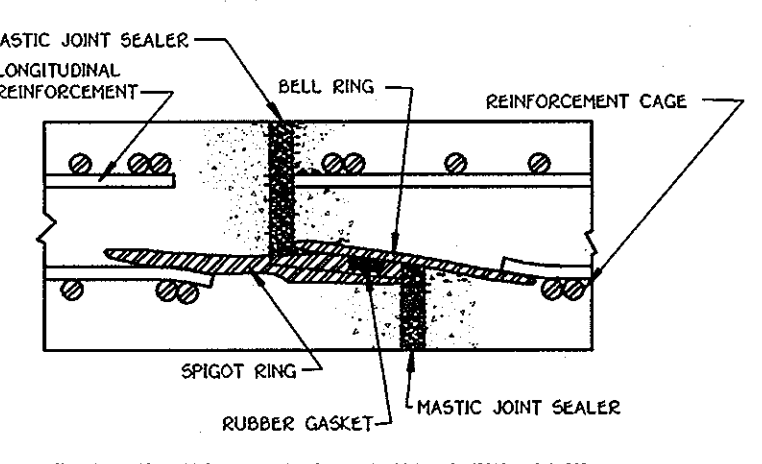
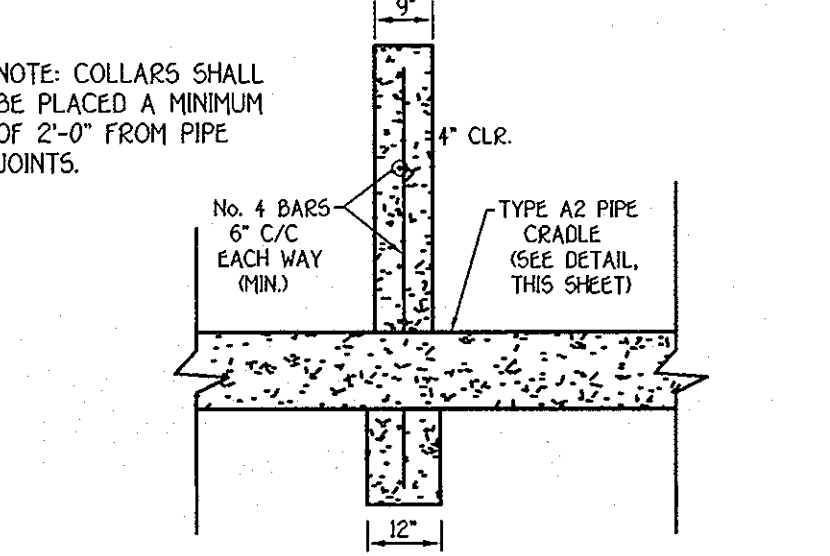
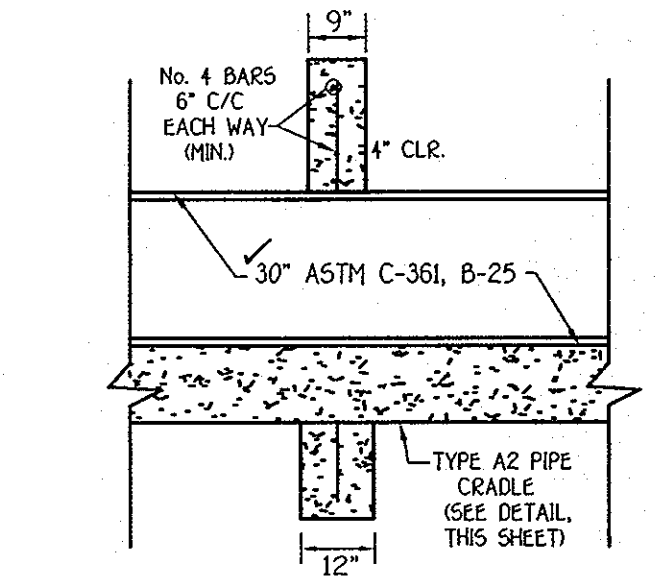
William R. Winkler 8-27-03
 Signature of Engineer
CHIEF, BUREAU OF HIGHWAYS
 Printed Name of Engineer

AS-BUILT CERTIFICATION

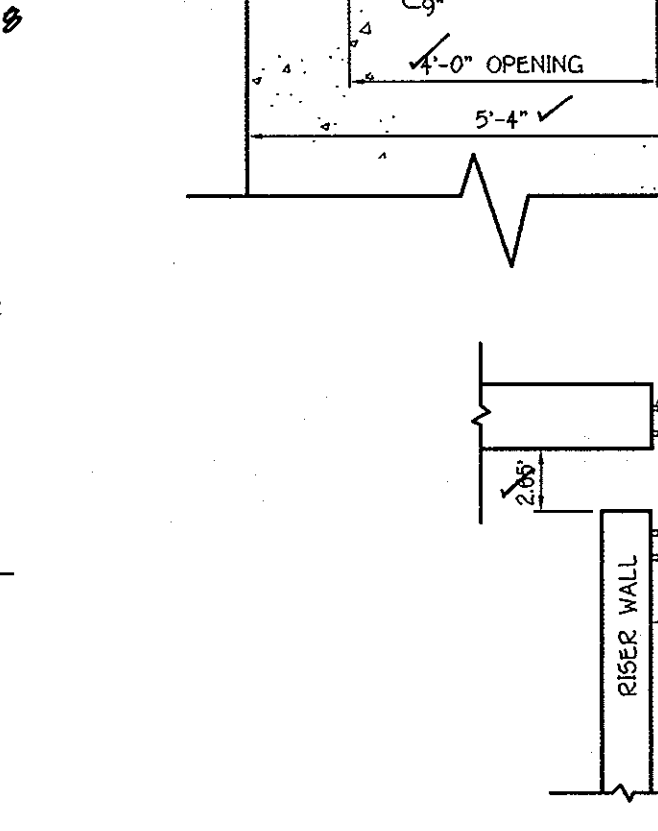
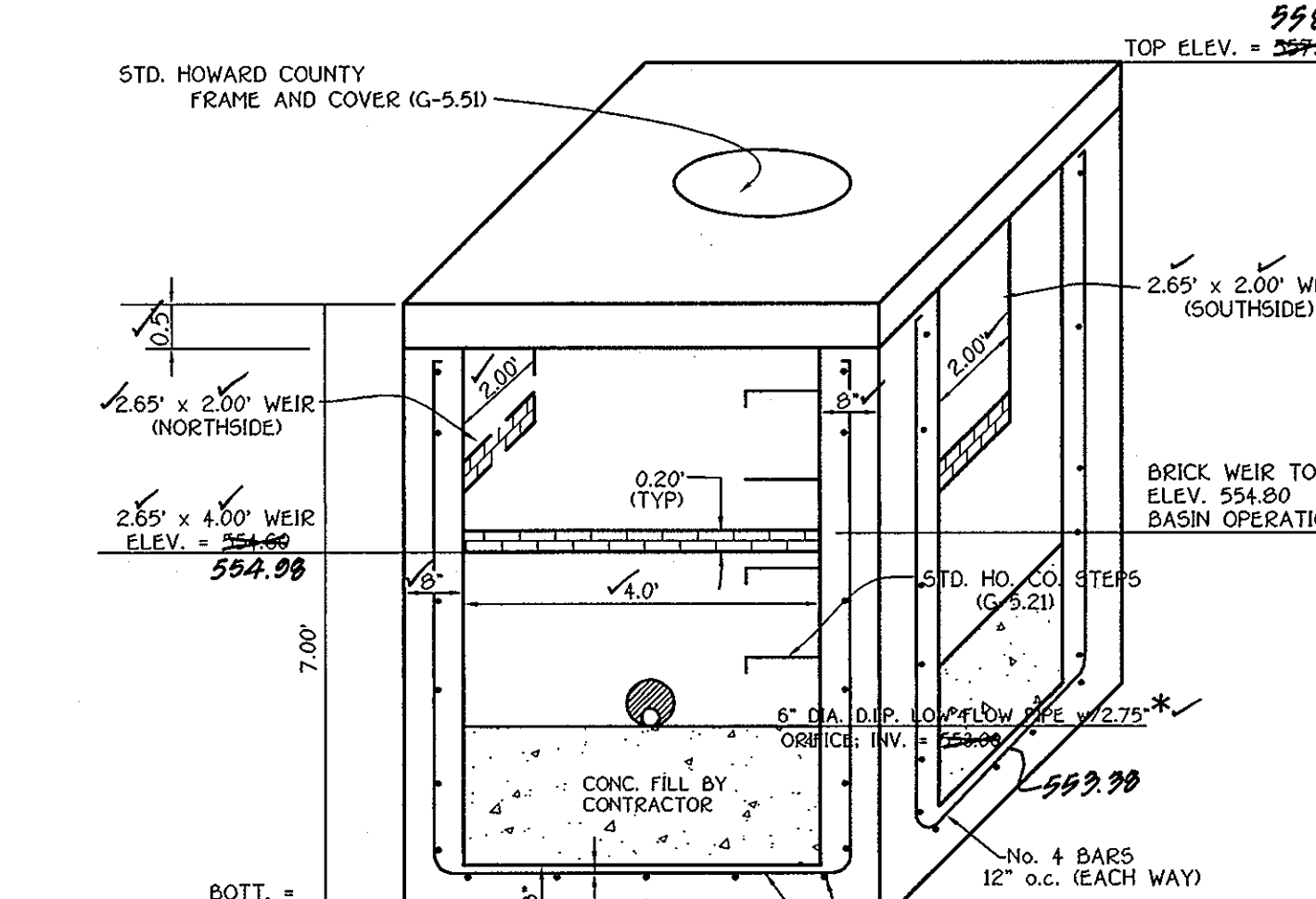
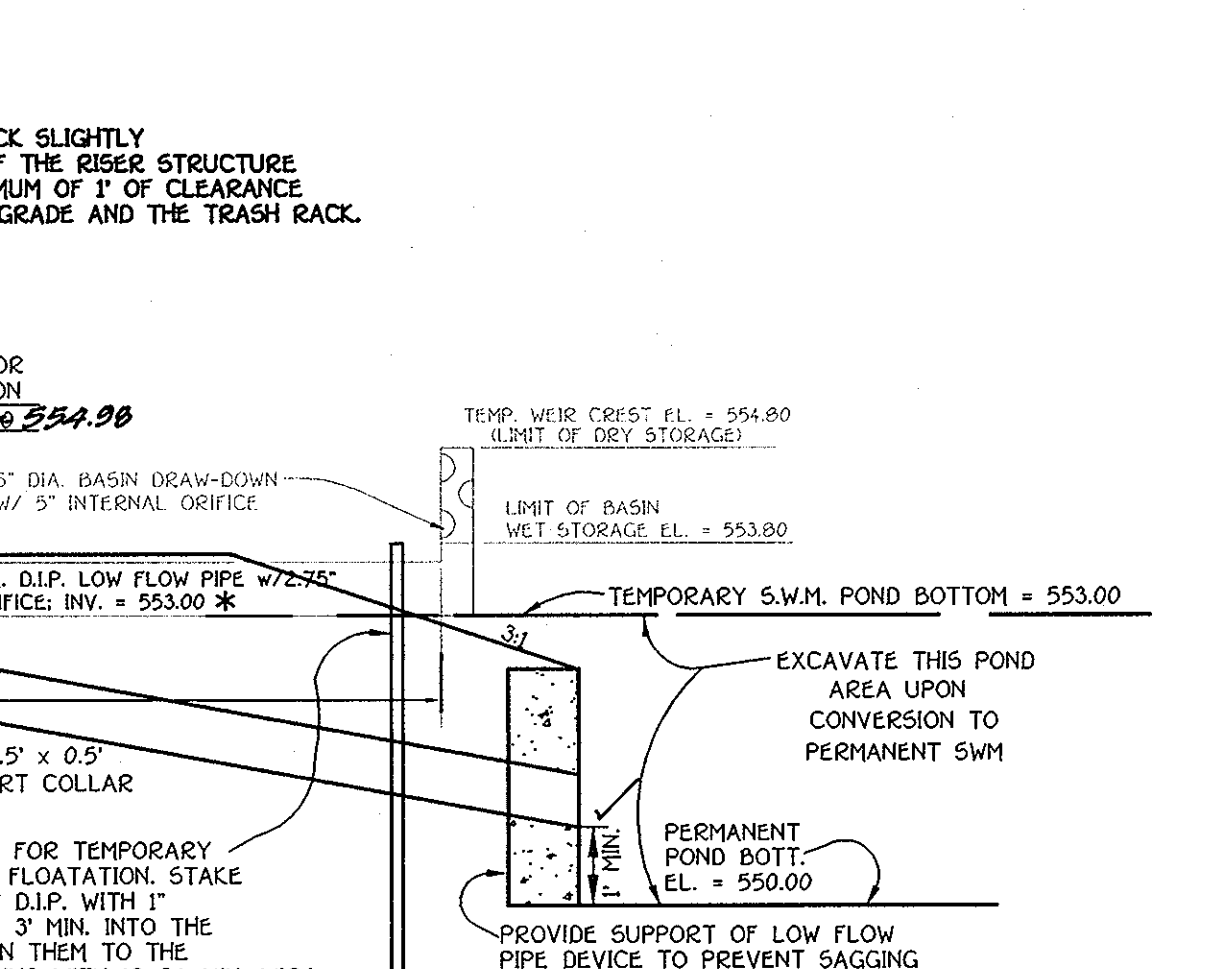
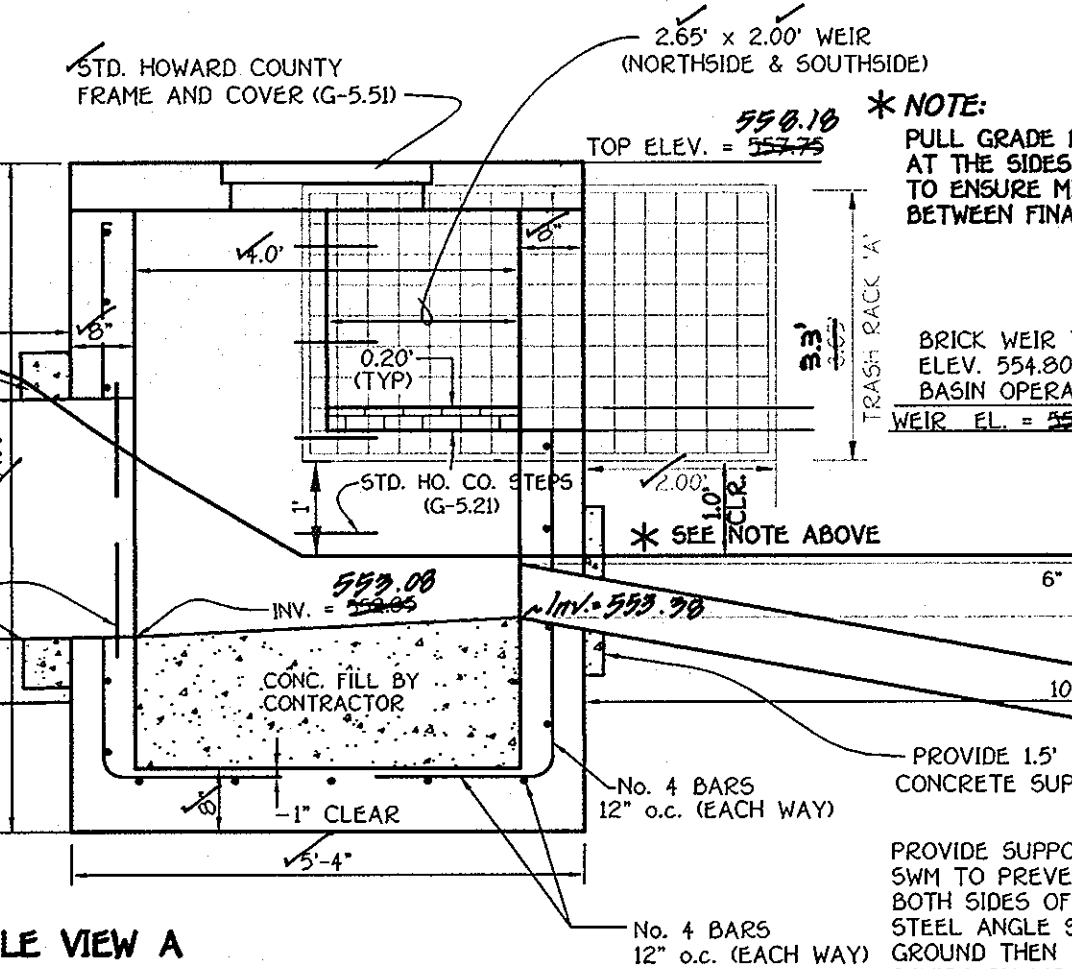
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

[Signature] 1/30/04
 Signature
P.E. NO. 912406
 Date

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



NOTE: ADJUST GRADE AT RISER TO ENSURE ADEQUATE CLEARANCE FOR TRASH RACK (1.0' MIN)



STORMWATER MANAGEMENT NOTES AND DETAILS

ARCHERS GLEN
 LOTS 6 THRU 22 AND
 PRESERVATION PARCELS 'A' THRU 'C'

ZONED: RC-DEO
 TAX MAP No. 9, PARCEL No. 301, GRID No. 22
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 9, 2003
 SHEET 17 OF 18

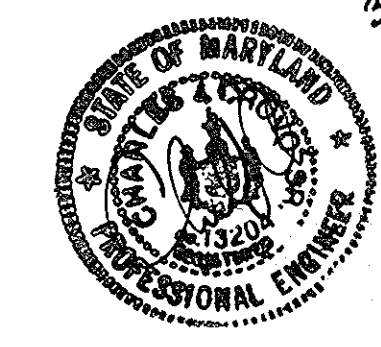
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS



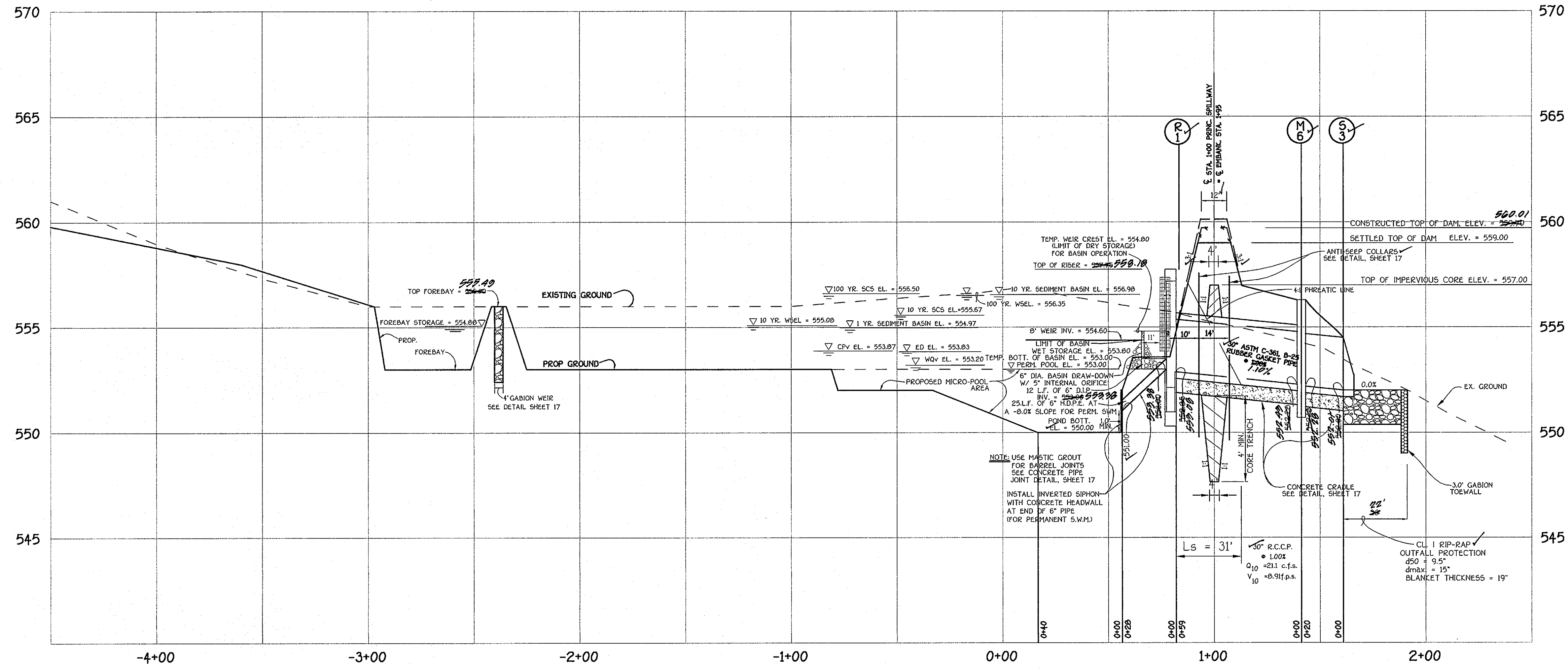
NO.	REVISE SHEET NO.	REVISION	DATE
			11-3-03

OWNER
 ARNOLD M. SEWELL
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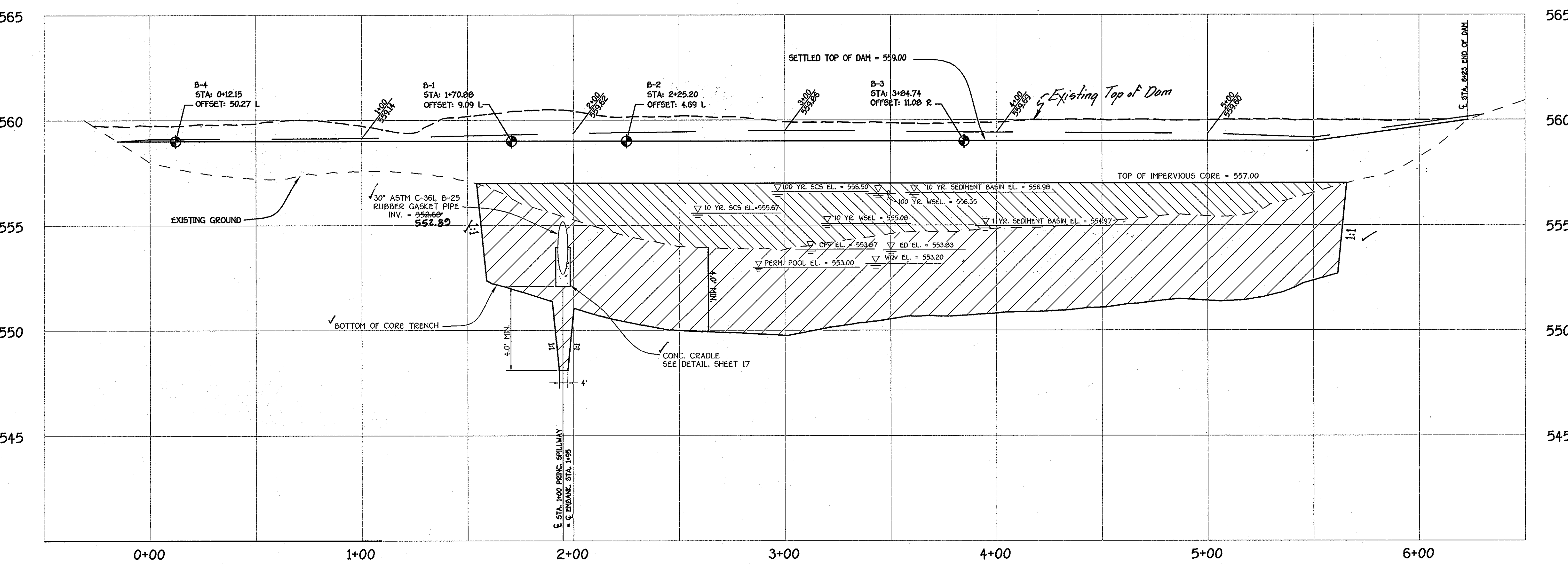
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AS-BUILT 9-24-06



S.W.M. FACILITY
PRINCIPAL SPILLWAY PROFILE
SCALE: HOR. 1" = 30'
VERT. 1" = 3'



S.W.M. FACILITY PROFILE ALONG EMBANKMENT
SCALE: HOR. 1" = 30'
VERT. 1" = 3'

By The Developer:
I/We Certify That All 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 Shall Engage A Registered Professional Engineer To Supervise Pond Construction And 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.

Vincent R. Poljanec 8/15/03
Signature Of Developer Date
VINCENT R. POLJANEC
Printed Name Of Developer

By The Engineer:
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/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Charles J. Cravo, Sr. 8/18/03
Signature Of Engineer Date
CHARLES J. CRAVO, SR.
Printed Name Of Engineer

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Jim Mays, P.E. 8/25/03
USDA-Natural Resources Conservation Service Date
These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

William R. Mahan, Jr. 8-27-03
Howard Soil Conservation District Date
Approved: Department Of Public Works
Chief, Bureau Of Highways

David Handra 9/29/03
Approved: Department Of Planning And Zoning Date
Chief, Division Of Land Development

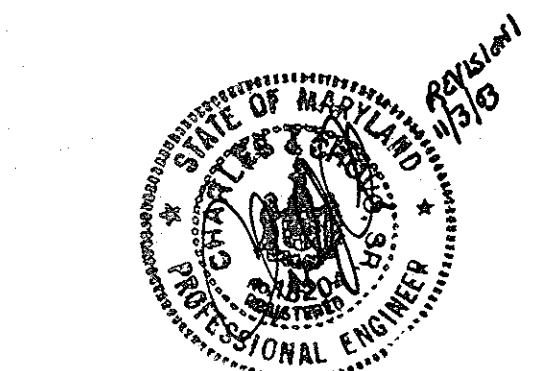
John Dammann 9/5/03
Chief, Development Engineering Division Date

AS-BUILT CERTIFICATION
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

[Signature] 13204
Signature P.E. No. 3/24/06
Date

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

NO.	REVISE SHEET NO.	REVISION	DATE
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