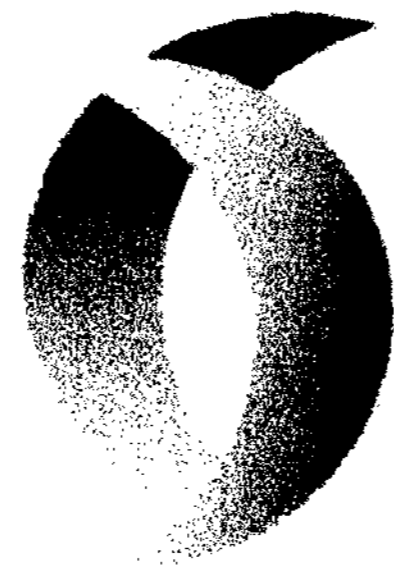


# SITE DEVELOPMENT PLAN



## Baltimore Washington Technology Center

### MASS GRADING PHASE I

**LEGEND**

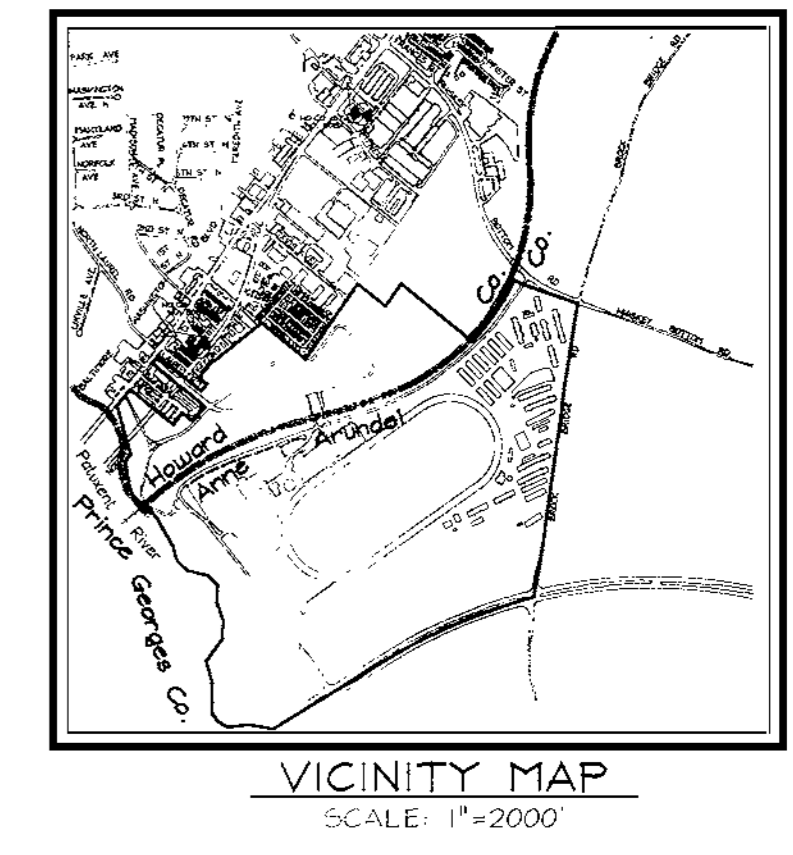
Existing Contour: --- 382 ---  
Proposed Contour: --- 382 ---  
Spot Elevation: +82.53  
Direction of Flow: →

Existing Trees to Remain: [Symbol]  
Light Poles Post Top: [Symbol] Overhead Boltard: [Symbol]

100 Year Floodplain: [Symbol]  
Non-Tidal Wetlands: [Symbol]  
15%-24.99% Slopes: [Symbol]  
25%-49.99% Slopes: [Symbol]

**BENCHMARKS**

Howard County Station: 50BA  
N 527,561.678 E 1,359,772.604 Elev.: 249.437  
Howard County Station: 50B5  
N 524,999.375 E 1,357,925.748 Elev.: 178.195



**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 "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- The contractor is to notify the following utilities or agencies at least five days before starting work on these drawings:
  - Miss Utility: 1-800-257-7777
  - Bell Atlantic Telephone Company: 1-866-586-4301
  - Howard County Bureau of Utilities: 313-2366
  - AT&T Cable Location Division: 313-3553
  - B.G.F.E. Co. Contractor Services: 850-4620
  - B.G.F.E. Co. Underground Damage Control: 767-4620
  - State Highway Administration: 531-5533
- Site analysis:
  - Area of parcel: 61.43 Ac ±
  - Present zoning: B-2, M-2
  - Use of structure: N/A
  - Building area: N/A
  - Proposed Building: N/A
  - Building coverage on site: N/A
  - Paved parking lot/area: N/A
  - Area of 15.0%-24.99% slopes on site: 747 sf
  - Area of 25.0%-50.0% slopes on site: 13,413 sf
  - Total contiguous area of 25.0%-50.0% slopes on site: 13,413 sf.
- Project background:
  - Location: Laurel, Md., Tax Map 50, Parcel 264
  - Zoning: B-2, M-2
  - Subdivision: N/A
  - Section/Area: N/A
  - Site Area: 61.43 Acres
  - DPZ references: WP-01-24, WP-01-106
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to start of work.
- Any damage to public right-of-ways, paving, or existing utilities will be corrected at the contractor's expense.
- Existing utilities located from Road Construction Plans, Field Surveys, Public Water and Sewer Extension Plans and available record drawings. Approximate location of existing utilities is shown for the contractor's information. Contractor shall locate existing utilities well in advance of construction activities and take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- All reinforced concrete for storm drain structures shall have a minimum of 28 days strength of 3,500 p.s.i.
- 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.
- Estimates of earthwork quantities are provided solely for the purpose of calculating fees.
- Soil compaction specifications, requirements, methods and materials are to be in accordance with the recommendations of the project Geotechnical Engineer, Geotechnical Engineer to confirm acceptability of proposed paving section, based on soil test prior to construction.
- All storm drain pipe bedding shall be Class "C".
- The topography shown herein is based on aerial photogrammetric mapping provided by the client, Dated March, 11, 1991. The project boundary is based on a boundary survey performed by Vogel & Associates, Inc. dated August, 2000. The coordinates shown herein are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County Monument Nos. 50B5 and 50BA were used for this project.
- A noise study is not required due to commercial use.
- Public Water in Washington Blvd. per Contract No. 36 WFS.
- Public Sewer on site per Contract No. 24-S.
- Stormwater Management is provided via a Wet Pond for Water Quality and Detention for Quantity Control of the two year and ten year storms.
- The proposed Stormwater Management Facility will be privately owned and maintained.
- Stormwater Management is hazard class "A".
- The purpose of this plan is to mass grade the site and construct the final Stormwater Management Facility.
- Reference waiver WP-01-24 approved 11/28/00 to allow removal of existing paving and construction of pond outfall.
- Outfall within the Floodplain and to allow grading within a Stream Buffer to reconstruct an Existing Roadway. (SECTIONS 16.15 (D)(2)(C)(2) AND 16.116(A)(2))
- Forest Conservation requirements are fulfilled by retention of 6.53 Acres on Site and payment of a Fee-in-Lieu for 1.67 Acres (21,623.56). A **Plot of Forest Conservation Easement was recorded in the Howard County Land Records (Plat #15007 and 15008)**.
- There are no known or suspected wetlands on this site.
- All exterior lighting to comply with section 34 of the Zoning Regulations.
- Existing Floodplain elevation from Flood Insurance Rate Map Community Panel Number 240044 0045 B.
- Stormwater Management Forebay to be provided with future Site Development Plan.
- Contractor to remove all fill material below the Proposed Pond Bottom and replace with suitable material (for a Wet Pond) under the supervision of the Project Geotechnical Engineer.
- MDE permit/tracking #01-NI-0019/200161738.
- LANDSCAPING TO BE ADDRESSED WITH FUTURE SITE DEVELOPMENT PLAN. LANDSCAPED BERM WILL BE PROVIDED ADJACENT TO THE LAKE.**
- REFERENCE WAIVER WP-01-106 APPROVED APRIL 3, 2001 TO EXTEND DEADLINE DATE FOR SUBMISSION OF SITE PLAN ORIGINALS FOR SIGNATURE (SECTION 16.156 (J) AND (K)).
- APPO TRAFFIC TEST PREPARED BY THE TRAFFIC GROUP ON AUGUST 24, 2000 AND APPROVED ON SEPT 26, 2000 WHEN PLAN WAS GIVEN TECHNICALLY COMPLETE STATUS.
- REFERENCE WAIVER WP-01-24 WAS APPROVED ON 11/28/00 SUBJECT TO THE FOLLOWING CONDITIONS:
  - OBTAIN ALL REQUIRED LOCAL, STATE, AND FEDERAL PERMITS FOR THE PROPOSED CONSTRUCTION.
  - THE DISTURBANCE WILL BE LIMITED ONLY TO THE EXTENT NECESSARY TO COMPLETE THE PROPOSED WORK AS SHOWN ON SDP-01-32.

**SEQUENCE OF CONSTRUCTION**

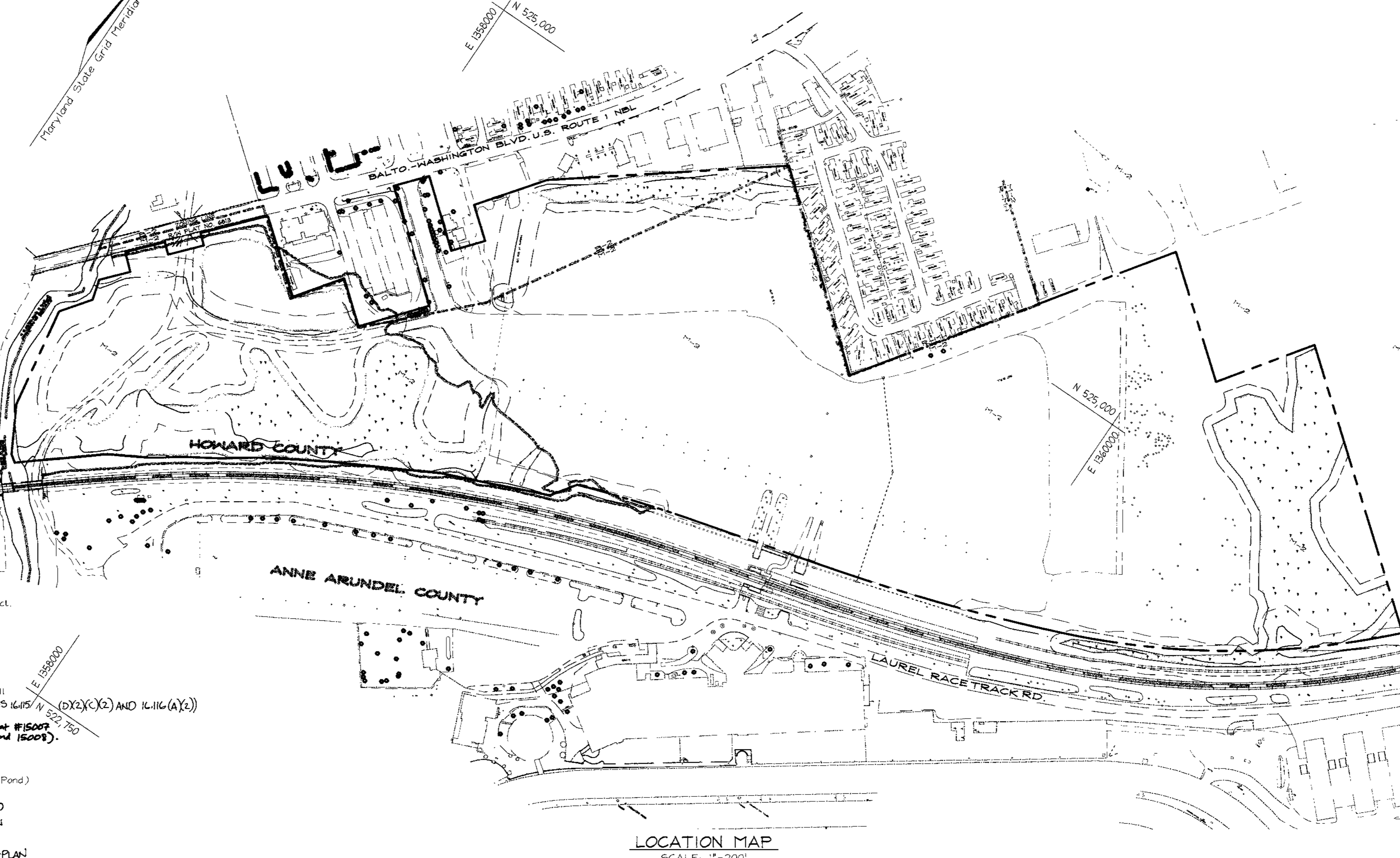
- Obtain grading permit. (1 day)
- Notify Howard County Department of Inspections, Licenses and Permits at (410)313-1880 at least 24 hours before starting any work. (1 day)
- Install stabilized construction entrance, silt fence, silt fence and inlet protection. Install earth dike within Phase A LOD. (2 days)
- Construct stormwater management pond (sediment basin) and sediment trap #1. (2 weeks)
- With permission from sediment control inspector, begin grading of site. Raise the south-western and south-eastern earth dikes consistent with the construction of the pond/basin and mass grading of the site. When south-eastern section reaches grade, construct earth dike within Phase B LOD and bring that area to grade, while maintaining the B-2 earth dike at Phase A LOD. Care must be taken at all stages to ensure flow is directed back into site. (4 weeks)
- Finish mass grading site and adjust earth dikes as required to provide positive drainage to the sediment basin (see proposed spot elevations on plan). (4 weeks)
- After mass grading is complete and contributing area stabilized, backfill, seed and mulch sediment trap #1. Direct this runoff to the pond/basin. (2 days)
- Stabilize entire site with seed and mulch. Provide erosion control matting for all slopes which exceed 3:1 slopes. (1 week)
- During grading and after each rainfall, the contractor shall inspect and provide necessary maintenance to sediment control measures.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed with:
  - 7 calendar days for all perimeter Sediment Control Structures, Dikes, Swales, ditch perimeter slopes and all slopes greater than 3:1.
  - 14 calendar days for all other disturbed areas.
- Upon stabilization of all disturbed areas and with approval of sediment control inspector, remove all remaining sediment control devices except earth dike B-2 running along the south-eastern side of the site into the storm water management facility, this earth dike is permanent. Convert basin to Stormwater Management pond. (One week)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chad Dammann* 11/28/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Cindy Hamata* 11/29/01  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Joseph R. Smith* 11/30/01  
DIRECTOR DATE



**SHEET INDEX**

DESCRIPTION	SHEET NO.
Cover Sheet	1 of 13
Mass Grading Plan	2 of 13
Final Grading Plan	3 of 13
Final Grading Plan	4 of 13
Drainage Area Plan	5 of 13
Sediment Control Plan	6 of 13
Sediment Control Plan	7 of 13
Sediment Control Plan	8 of 13
Sediment and Erosion Control Details	9 of 13
Stormwater Management Notes and Details	10 of 13
Forest Conservation Plan	11 of 13
Forest Conservation Plan	12 of 13
Forest Conservation Plan	13 of 13

**DEVELOPER**  
Maryland Jockey Club of Baltimore City Inc.  
P.O. Box 130  
Laurel, Md. 20725

**OWNER**  
Laurel Racing Association Limited Partnership  
P.O. Box 130  
Laurel, Md. 20725

ADDRESS CHART

STREET ADDRESS  
10121 North Second Street

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
N/A	N/A	264

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT	DIST	CENSUS TR.
N/A	10	M-2	50	6th	6069 03	

WATER CODE C05 SEWER CODE 7103000

**COVER SHEET**

**Baltimore Washington  
Technology Center**

TAX MAP #50 GRID #10 PART OF PARCEL 264  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**

ENGINEERS: 7125 Riverwood Drive Columbia, Maryland 21046-2354  
ARCHITECTS: Phone: 410-290-9550 Fax: 410-720-6226  
SURVEYORS: Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: DDS JR  
DRAWN BY: DDS JR  
CHECKED BY: R.W.V.  
DATE: SEPT. 27, 2001  
SCALE: As Shown  
W.O. NO.: 00-089

1 SHEET OF 13



MATCHLINE SEE SHEET 3



*Albino Cummings*  
*Cindy Hermata*  
*Frank Roth*

11/29/01  
 11/30/01

NOTE:  
 FUTURE STORM DRAIN BY-PASS  
 SYSTEM WILL BE SHOWN ON  
 FUTURE PHASE OF THE PROJECT.

**LEGEND**

- Existing Contour
- Proposed Contour
- Spot Elevation
- Direction of Flow
- Existing Trees to Remain
- Light Poles

**DEVELOPER**

Maryland Jockey Club of Baltimore City, Inc.  
 P.O. Box 100  
 Laurel, Md. 20725

**OWNER**

Laurel Siding Association Limited Partnership  
 P.O. Box 100  
 Laurel, Md. 20725

**MASS GRADING PLAN**

**Baltimore Washington  
Technology Center**

TAX MAP #50 GRID #10 PART OF PARCEL 264  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**

ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

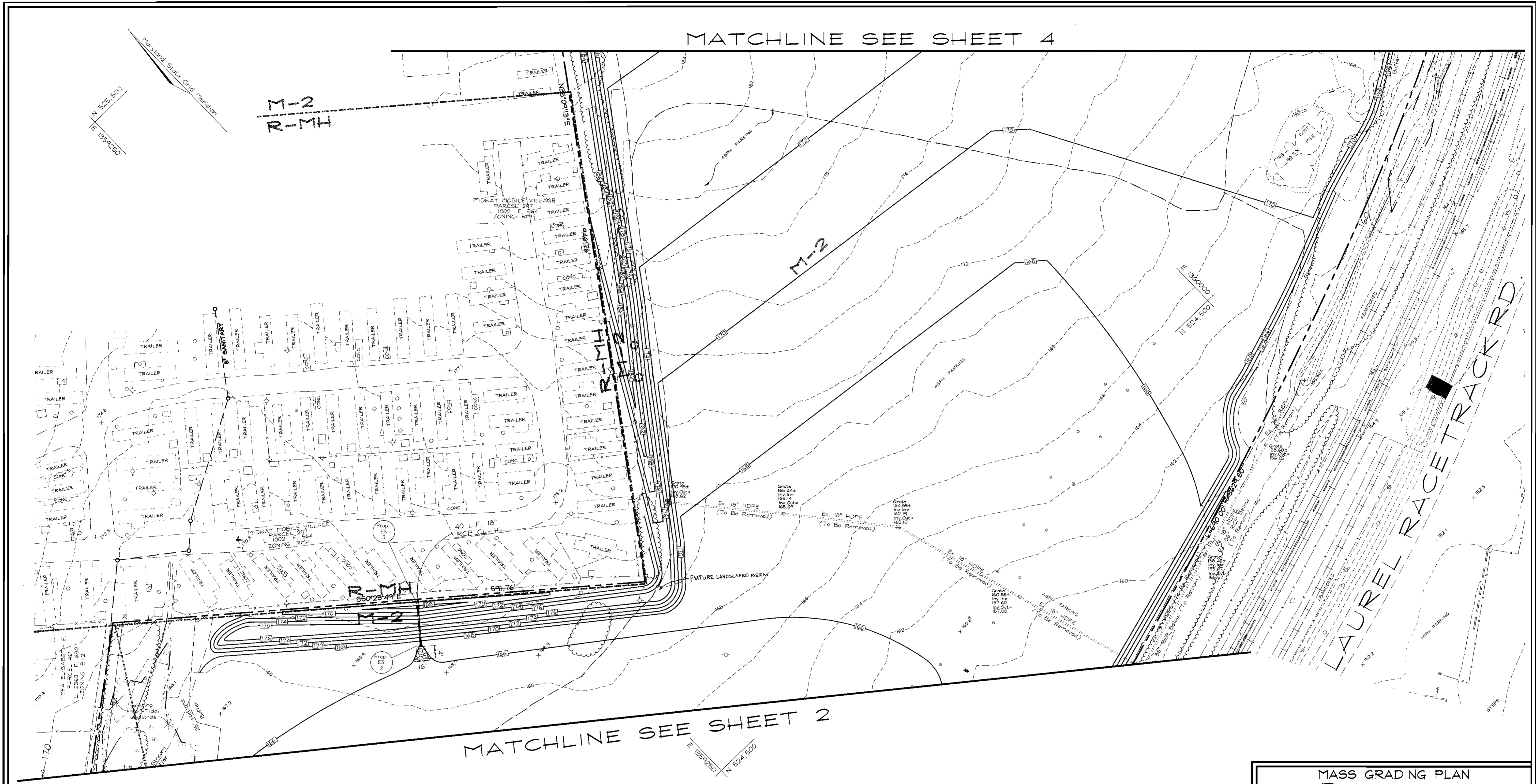
STATE OF MARYLAND  
PROFESSIONAL ENGINEER

DESIGN BY: DDB JR.  
DRAWN BY: DDB JR.  
CHECKED BY: R-  
DATE: 08/28/01  
SCALE: 1"=50'  
A.D. NO. 00 089

2 SHEET 13



MATCHLINE SEE SHEET 4



MATCHLINE SEE SHEET 2

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chris Hanover*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 11/20/01

*Chris Hanover*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 11/20/01

*James J. Smith*  
 DIRECTOR  
 DATE: 11/20/01

NOTE:  
 FUTURE STORM DRAIN BY-PASS  
 SYSTEM WILL BE SHOWN ON  
 FUTURE PHASE OF THE PROJECT.

**LEGEND**

- Existing Contour: - - - - - 382
- Proposed Contour: - - - - - 425.3
- Spot Elevation: 425.3
- Direction of Flow: →
- Existing Trees to Remain: [Tree Symbol]
- Light Poles: Post Top ☆, Overhead ○

**DEVELOPER**

Maryland Jockey Club of Baltimore City Inc.  
 P.O. Box 130  
 Laurel, Md. 20725

**OWNER**

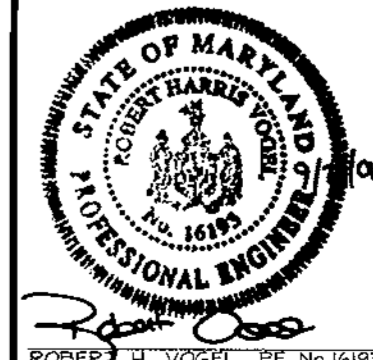
Laurel Racing Association Limited Partnership  
 P.O. Box 130  
 Laurel, Md. 20725

**MASS GRADING PLAN**



TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia



DESIGN BY: DDS JR  
 DRAWN BY: DDS JR  
 CHECKED BY: R-V  
 DATE: SEPT 24, 2001  
 SCALE: 1"=50'  
 W.O. NO.: 00-080

3 SHEET OF 13





MATCHLINE SEE SHEET 3

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Alan Cummings*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 11/20/01

*Candy Krasner*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 11/29/01

*Greg S. Smith*  
 DIRECTOR  
 DATE: 11/30/01

NOTE:  
 FUTURE STORM DRAIN BY-PASS  
 SYSTEM WILL BE SHOWN ON  
 FUTURE PHASE OF THE PROJECT.

**LEGEND**

- Existing Contour -382
- Proposed Contour -382
- Spot Elevation +8253
- Direction of Flow
- Existing Trees to Remain
- Light Poles Post Top Overhead

**DEVELOPER**

Maryland Jockey Club of Baltimore City Inc.  
 P.O. Box 130  
 Laurel, Md 20725

**OWNER**

Laurel Racing Association Limited Partnership  
 P.O. Box 130  
 Laurel, Md. 20725

**MASS GRADING PLAN**

**Baltimore Washington  
 Technology Center**

TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: DDS JR.

DRAWN BY: DDS JR.

CHECKED BY: R-V.

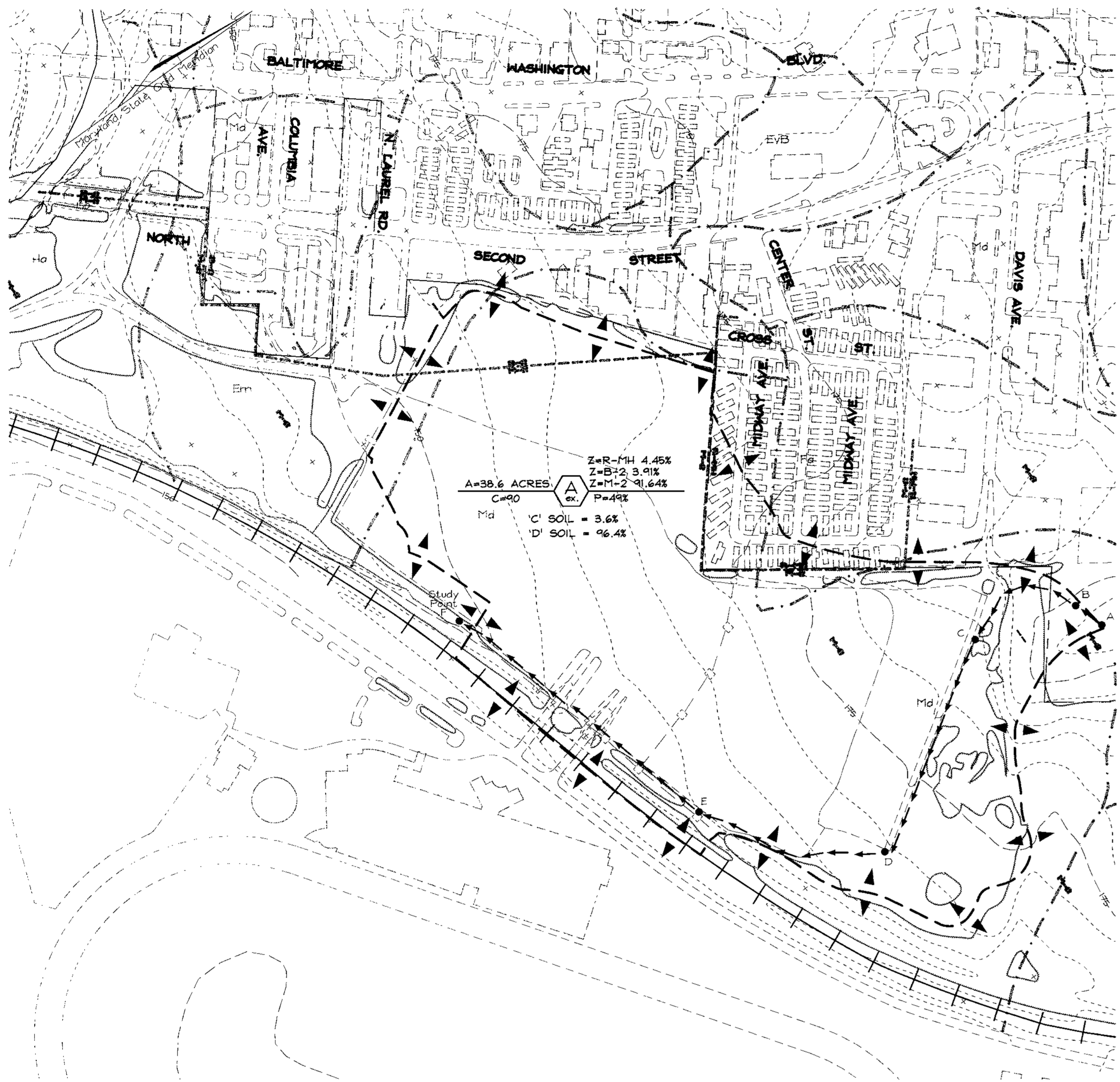
DATE: SEPT 24, 2001

SCALE: 1"=50'

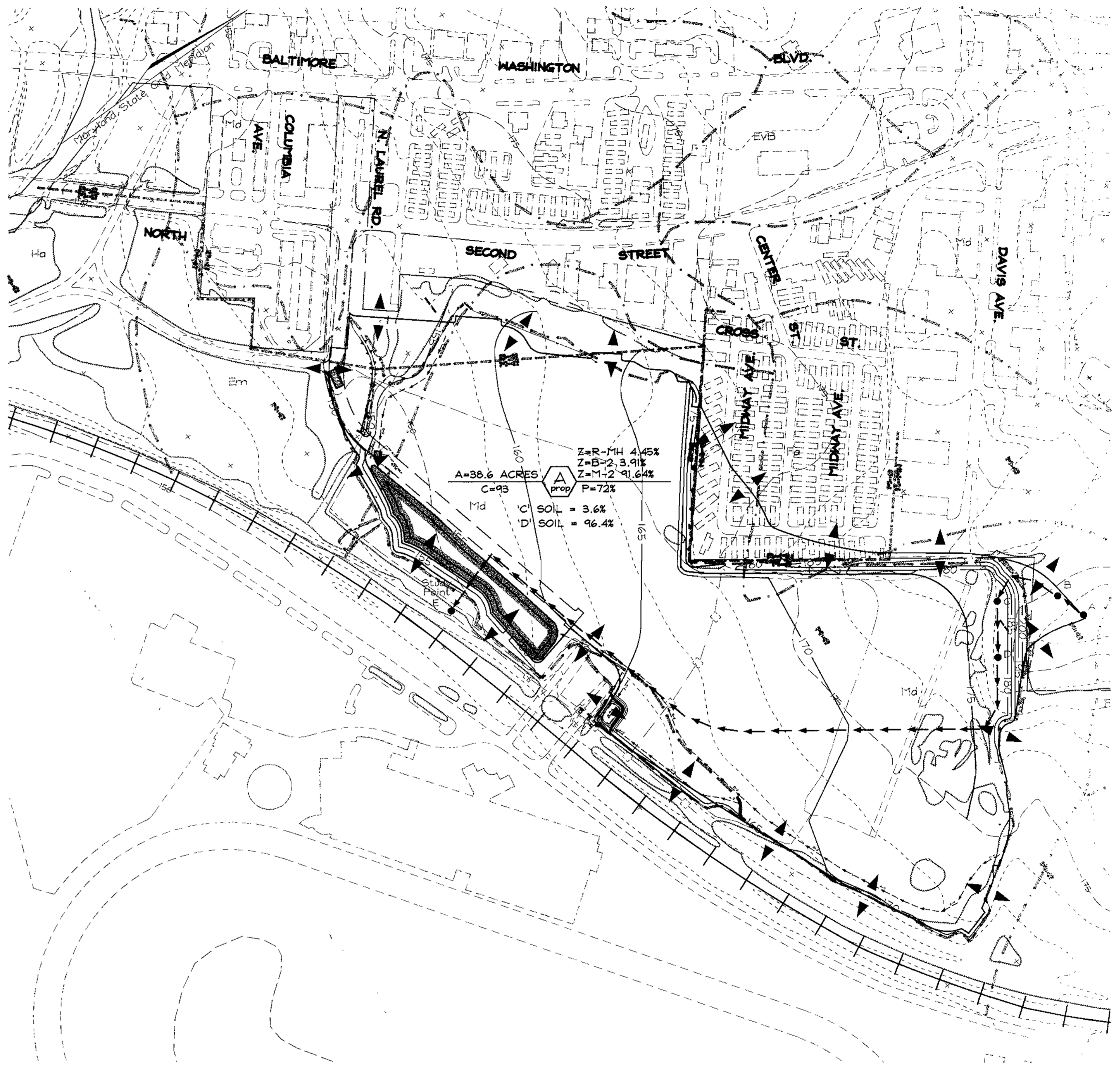
W.O. NO.: 00-09A

4 SHEET OF 13





EXISTING CONDITIONS  
Scale: 1"=200'



PROPOSED CONDITIONS  
Scale: 1"=200'

**LEGEND**

- Existing Contour 382
- Proposed Contour 382
- Spot Elevation 102.53
- Direction of Flow
- Existing Trees to Remain
- Light Poles
- Soils Divide
- Existing Drainage Divide
- Proposed Drainage Divide

**SOILS LEGEND**

SYMBOL	MADE LAND NAME / DESCRIPTION	SOIL GROUP
Md	FALLSINGTON LOAM	D
Em	ELKTON SILT LOAM	C

NOTE: This Plan is for Drainage Area and Soil information purposes only.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*John P. ...*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 11/20/01 DATE  
*... ..*  
 CHIEF, DIVISION OF LAND DEVELOPMENT 11/29/01 DATE  
*... ..*  
 DIRECTOR 11/30/01 DATE

**DEVELOPER**

Maryland Jockey Club of Baltimore City Inc.  
 P.O. Box 130  
 Laurel, Md. 20725

**OWNER**

Laurel Racing Association Limited Partnership  
 P.O. Box 130  
 Laurel, Md. 20725

**STORMWATER MANAGEMENT DRAINAGE AREA MAP**

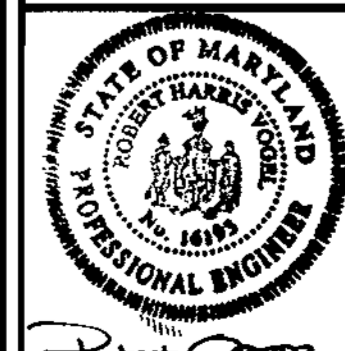
**Baltimore Washington Technology Center**

TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



**FREDERICK WARD ASSOCIATES, INC.**

ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

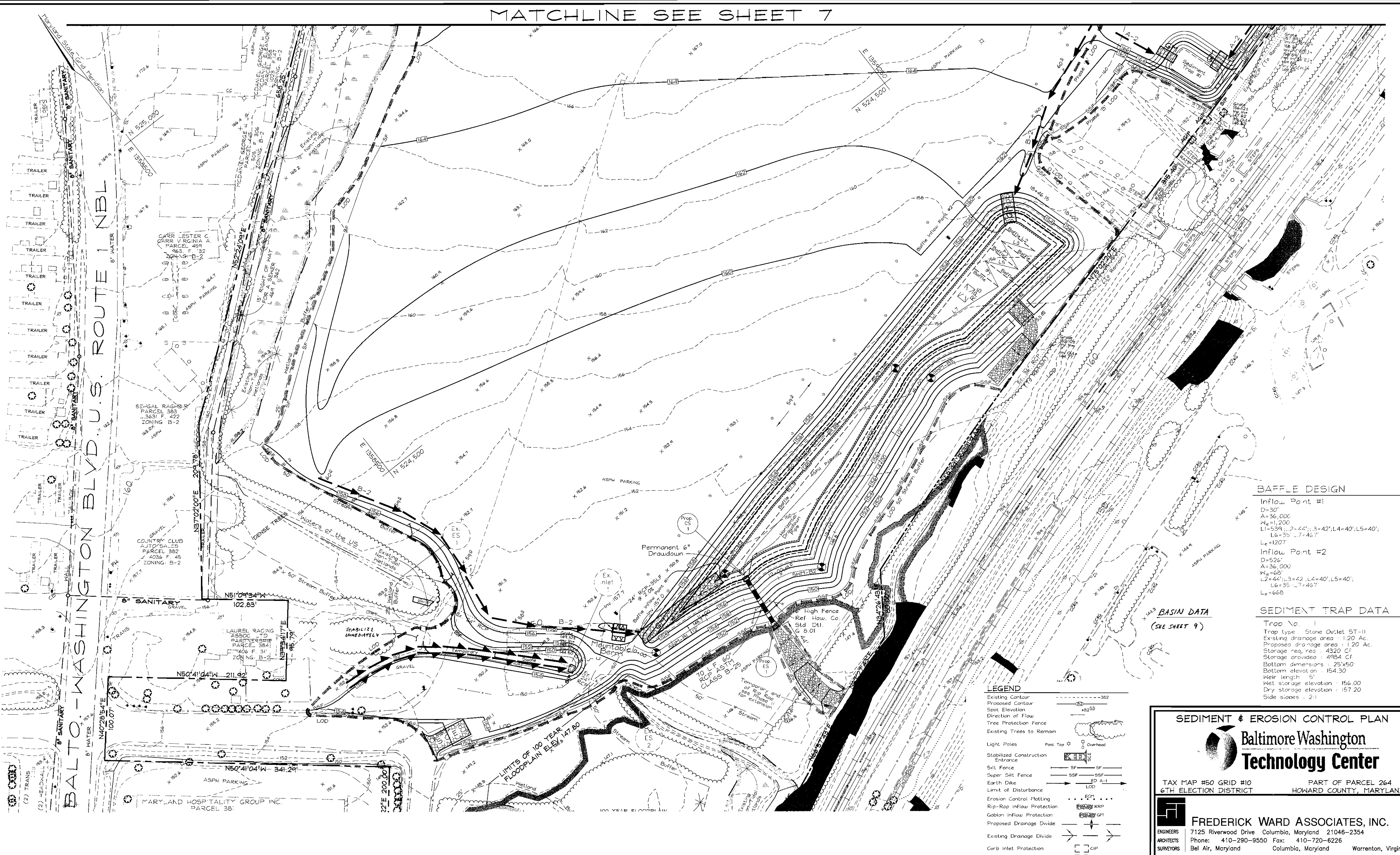


DESIGN BY: DDS JR  
 DRAWN BY: DDS JR  
 CHECKED BY: RHV  
 DATE: SEPT. 24, 2001  
 SCALE: 1"=200'  
 W.O. NO. 00-089

SWM 1 OF 1  
 5 SHEET OF 13



MATCHLINE SEE SHEET 7



**BAFFLE DESIGN**

**Inflow Point #1**  
 D=30'  
 A=36,000  
 L=1200  
 L1=539', L2=42', L3=42', L4=40', L5=40';  
 L6=35' L7=467'  
 L=1207'

**Inflow Point #2**  
 D=526'  
 A=36,000  
 L=60'  
 L2=44', L3=42', L4=40', L5=40';  
 L6=35' L7=467'  
 L=665'

**SEDIMENT TRAP DATA**

Trap No. 1  
 Trap Type: Stone Outlet ST-II  
 Existing drainage area: 1.20 Ac.  
 Proposed drainage area: 1.20 Ac.  
 Storage req. req: 4320 CF  
 Storage provided: 4984 CF  
 Bottom dimensions: 25x50  
 Bottom elevation: 154.30  
 Weir length: 51  
 Net storage elevation: 156.00  
 Dry storage elevation: 157.20  
 Side slopes: 2:1

**BASIN DATA**  
 (SEE SHEET 9)

**LEGEND**

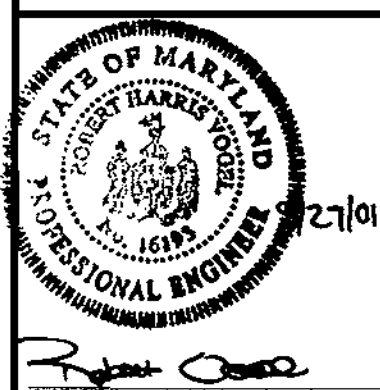
- Existing Contour
- Proposed Contour
- Spot Elevation
- Direction of Flow
- Tree Protection Fence
- Existing Trees to Remain
- Light Poles
- Stabilized Construction Entrance
- Silt Fence
- Super Silt Fence
- Earth Dike
- Limit of Disturbance
- Erosion Control Matting
- Rip-Rap Inflow Protection
- Gabion Inflow Protection
- Proposed Drainage Divide
- Existing Drainage Divide
- Curb Inlet Protection
- Standard Inlet Protection
- At Grade Inlet Protection
- Removable Pump Station

**SEDIMENT & EROSION CONTROL PLAN**



TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia



DESIGN BY: DCS JR  
 DRAWN BY: DCS JR  
 CHECKED BY: R-V  
 DATE: SEPT 24, 2001  
 SCALE: 1"=50'  
 W.O. NO: 00-08P  
 6 SHEET OF 13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 11/20/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 11/23/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 11/30/01  
 DIRECTOR

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL  
 [Signature] 11/15/01  
 USDA NATURAL RESOURCES CONSERVATION SERVICE  
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT  
 [Signature] 11/15/01  
 HOWARD SOIL CONSERVATION DISTRICT

**DEVELOPER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.  
 [Signature] Sept. 27, 2001  
 SIGNATURE OF DEVELOPER  
 DATE

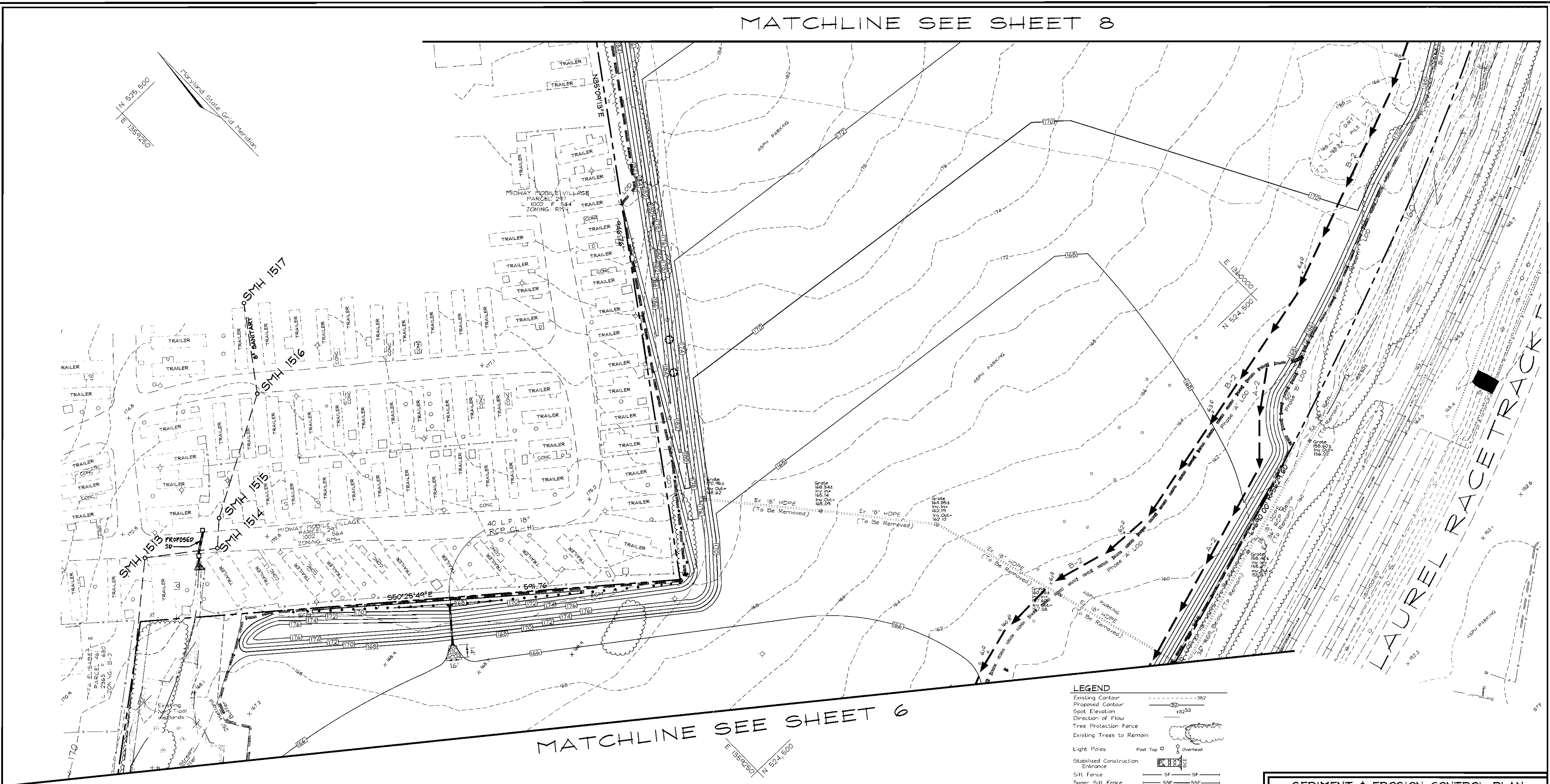
**ENGINEER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION 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.  
 [Signature] 9/27/01  
 SIGNATURE OF ENGINEER  
 ROBERT H. VOGEL  
 DATE

**DEVELOPER**  
 Maryland Jockey Club of Baltimore City Inc.  
 P.O. Box 130  
 Laurel, Md. 20725  
**OWNER**  
 Laurel Racing Association Limited Partnership  
 P.O. Box 130  
 Laurel, Md. 20725

H:\PROJECTS\1512019175\ENGR\Wing\Wingase\1502285.dwg Thu Sep 27 08:53:37 2001 JAV



MATCHLINE SEE SHEET 8



MATCHLINE SEE SHEET 6

**LEGEND**

Existing Contour	---
Proposed Contour	---
Spot Elevation	25.5
Direction of Flow	→
Tree Protection Fence	⊕
Existing Trees to Remain	⊕
Light Poles	Post Top ⊕ Overhead
Stabilized Construction Entrance	⊕
Silt Fence	SF
Super Silt Fence	SSF
Earth Dike	ED A-1
Limit of Disturbance	LOD
Erosion Control Matting	ECM
Rip-Rap Inflow Protection	RRP
Gabion Inflow Protection	GIP
Removable Pumping Station	RPS
Proposed Drainage Divide	→
Existing Drainage Divide	→
Curb Inlet Protection	CIP
Standard Inlet Protection	SIP
At Grade Inlet Protection	AGIP
Sump Pit	SP

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 11/20/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 11/29/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT HB DATE

*[Signature]* 11/30/01  
 DIRECTOR DATE

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL

*[Signature]* 11/5/01  
 USDA NATURAL RESOURCE CONSERVATION SERVICE DATE

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

*[Signature]* 11/5/01  
 HOWARD SOIL CONSERVATION DISTRICT DATE

**DEVELOPER'S CERTIFICATE**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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 THIS 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.

*[Signature]* 11/5/01  
 SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

I HEREBY 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.

*[Signature]* 11/21/01  
 SIGNATURE OF ENGINEER DATE  
 ROBERT H. VOGEL

**DEVELOPER**

Maryland Jockey Club of Baltimore Inc.  
 Laurel, Md. 20725

**OWNER**

Laurel Racing Association Limited Partnership  
 P.O. Box 130  
 Laurel, Md. 20725

**SEDIMENT & EROSION CONTROL PLAN**

**Baltimore Washington Technology Center**

TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

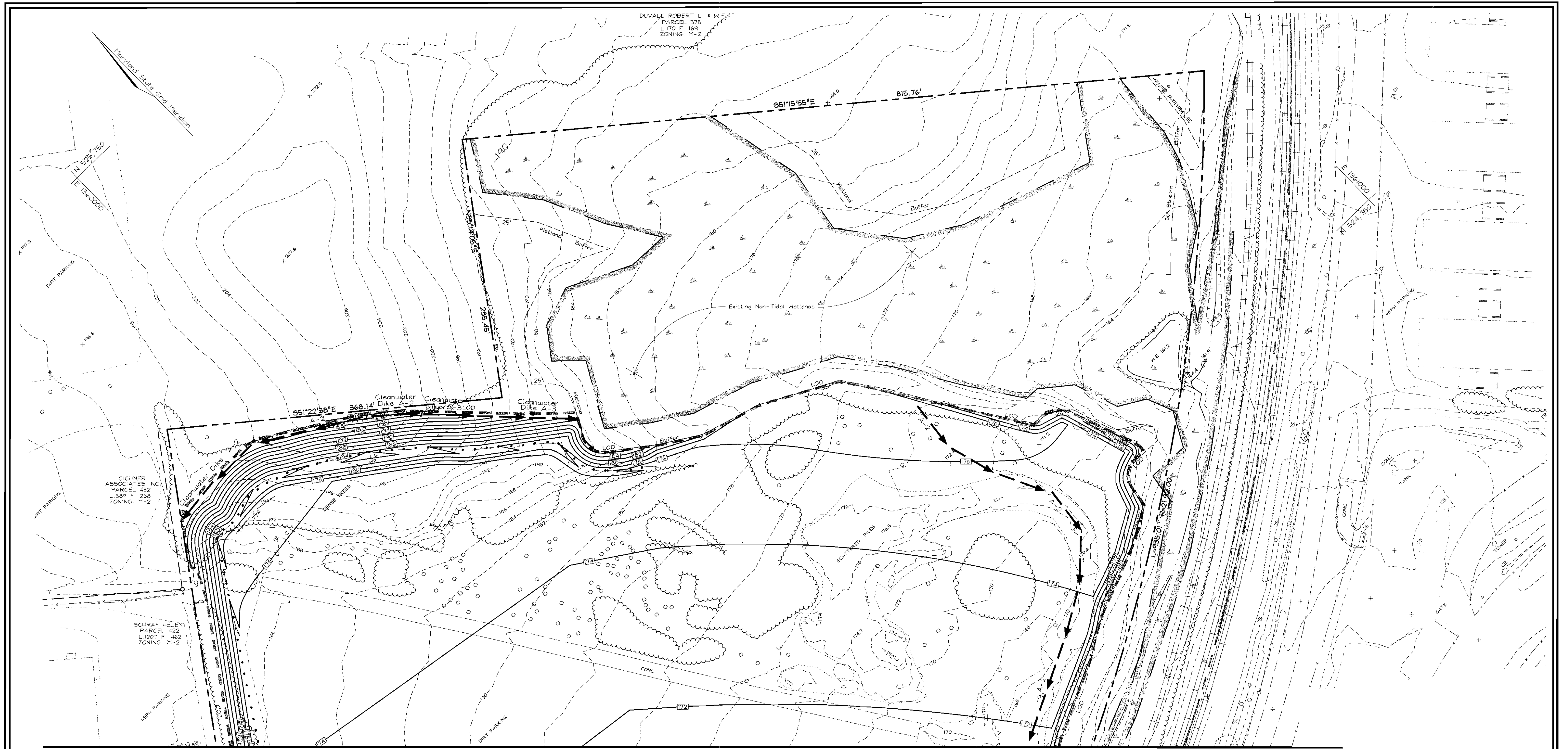
**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

**STATE OF MARYLAND PROFESSIONAL ENGINEER**

DESIGN BY: DJS JR.  
 CHECKED BY: RIV  
 DATE: SEP 24 2001  
 SCALE: 1"=50'  
 W.O. NO.: 00-284

7 SHEET OF 13





MATCHLINE SEE SHEET 7

**DEVELOPER**  
 Maryland Jockey Club of Baltimore City Inc.  
 P.O. Box 130  
 Laurel, Md. 20725

**OWNER**  
 Laurel Racing Association Limited Partnership  
 P.O. Box 130  
 Laurel, Md. 20725

- LEGEND**
- Existing Contour
  - Proposed Contour
  - Spot Elevation
  - Direction of Flow
  - Tree Protection Fence
  - Existing Trees to Remain
  - Light Poles
  - Stabilized Construction Entrance
  - Silt Fence
  - Super Silt Fence
  - Earth Dike
  - Limit of Disturbance
  - Erosion Control Matting
  - Rip-Rap Inflow Protection
  - Gabion Inflow Protection
  - Removable Pumping Station
  - Proposed Drainage Divide
  - Existing Drainage Divide
  - Curb Inlet Protection
  - Standard Inlet Protection
  - At Grade Inlet Protection
  - Sump Pit

**DEVELOPER'S CERTIFICATE**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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.

*Robert H. Vogel* Sept 27/01  
 SIGNATURE OF DEVELOPER DATE

**ENGINEER'S CERTIFICATE**

I HEREBY 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.

*Robert H. Vogel* 9/27/01  
 SIGNATURE OF ENGINEER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*John P. ...* 11/27/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Carol ...* 11/27/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*...* 11/30/01  
 DIRECTOR DATE

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*Jim ...* 11/5/01  
 USDA-NATURAL RESOURCE CONSERVATION SERVICE DATE

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

*...* 11/5/01  
 HOWARD SOIL CONSERVATION DISTRICT DATE

**SEDIMENT CONTROL PLAN**

**Baltimore Washington Technology Center**

TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**FREDERICK WARD ASSOCIATES, INC.**  
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: *DDS JR.*  
 DRAWN BY: *DDS JR.*  
 CHECKED BY: *R-V*  
 DATE: SEPT 24, 2001  
 SCALE: 1"=50'  
 W.O. NO.: 00-089

8 SHEET OF 13











PRINCE GEORGE'S COUNTY

HOWARD COUNTY

ANNE ARUNDEL COUNTY

BALTO.-WASHINGTON BLVD. U.S. ROUTE 1 NBL

MATCHLINE SEE SHEET 12

DEVELOPER  
Maryland Jockey Club of Baltimore Inc  
P.O. Box 130  
Laurel, Md. 20725

OWNER  
Laurel Racing Association Limited Partnership  
P.O. Box 130  
Laurel, Md. 20725



EXPLORATION RESEARCH, INC.  
ENVIRONMENTAL CONSULTANTS  
8318 FORREST STREET  
HISTORIC ELLICOTT CITY, MARYLAND 21045  
PHONE: (410) 750-1150 FAX: (410) 750-7350

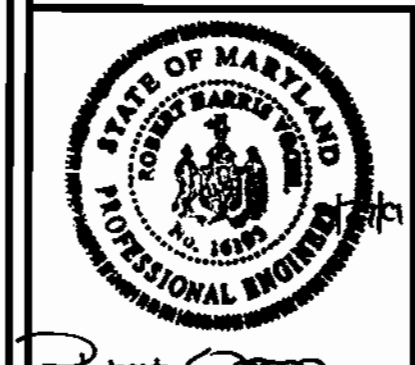
FOREST CONSERVATION PLAN



TAX MAP #50 GRID #10 PART OF PARCEL 264  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



FREDERICK WARD ASSOCIATES, INC.  
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
SURVEYORS Bel Air, Maryland, Columbia, Maryland, Warrenton, Virginia



DESIGN BY: DDS JR.  
DRAWN BY: DDS JR.  
CHECKED BY: RHV  
DATE: SEPT. 24, 2001  
SCALE: 1"=100'  
W.D. NO.: 00-089

11 SHEET OF 13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Frank Ramm* 11/30/01  
DIRECTOR DATE  
*Cindy Henstra* 11/29/01  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*William Summers* 11/29/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY RETENTION OF FOREST RESOURCES ON SITE.

M:\PROJECTS\2015175\ENR\UNQ\Phase1\8013511.dwg Thu Sep 27 08:59:28 2001 JAU





**DEVELOPER**  
 Maryland Jockey Club of Baltimore, Inc.  
 P.O. Box 130  
 Laurel, Md. 20725

**OWNER**  
 Laurel Racing Association Limited Partnership  
 P.O. Box 130  
 Laurel, Md. 20725



**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 6318 FORREST STREET  
 HISTORIC ELKOTT CITY, MARYLAND 21043  
 PHONE: (410) 750-1150 FAX: (410) 750-7350

**FOREST CONSERVATION PLAN**

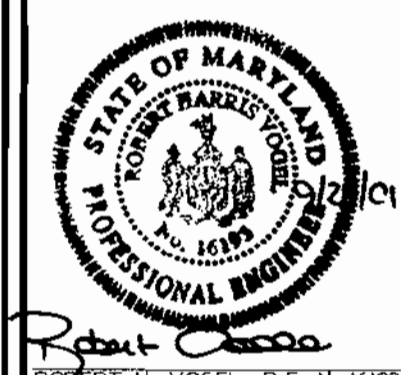


TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



**FREDERICK WARD ASSOCIATES, INC.**

ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354  
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226  
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia



DESIGN BY: DDS - R  
 DRAWN BY: DDS - R  
 CHECKED BY: RHV  
 DATE: SEPT. 24, 2001  
 SCALE: 1"=100'  
 W.D. NO. 09-179

12 SHEET OF 13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James R. Hunter* 11/20/01  
 DIRECTOR DATE  
*Cindy Kramida* 11/21/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*John P. ...* 11/21/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY RETENTION OF FOREST RESOURCES ON SITE.



# FOREST CONSERVATION WORKSHEET

	Acres
Net Tract Area	(1/00 ac.)
A. Total Tract Area	61.40
B. Area Within 100 Year Floodplain	13.88
C. Other deductions	0
D. Net Tract Area	47.52
Zoning Use Category: Commercial/Industrial/Office	
Land Use Category	
E. Afforestation Minimum (15% x D)	7.13
F. Conservation Threshold (15% x D)	7.13
Existing Forest Cover	
G. Existing Forest on Net Tract Area	9.01
H. Forest Area Above Afforestation Threshold	1.88
I. Forest Area Above Conservation Threshold	1.88
Breakeven Point	
J. Forest Retention Above Threshold with no Mitigation	7.51
K. Clearing Permitted without Mitigation	1.50
Proposed Forest Clearing	
L. Forest Areas to be Cleared	2.48
M. Forest Areas to be Retained	6.53
Planting Requirements	
N. Reforestation for Clearing Above Threshold	0.47
P. Reforestation for Clearing Below the Threshold	1.20
Q. Credit for Retention Above Conservation Threshold	0
R. Total Reforestation Required	1.67
S. Total Afforestation Required	0
T. Total Reforestation and Afforestation Requirement	1.67

## MANAGEMENT NOTES FOR FOREST RETENTION AREAS




- All proposed activities shall adhere to the conditions, schedules and terms of an approved sediment control and erosion plan.
- After the boundaries of the retention area have been staked and flagged and before any disturbance has taken place on-site, a preconstruction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate County inspectors shall attend.
- Tree protection for all retained areas:
  - All retention areas within 50 feet of proposed construction activities shall be protected by highly visible, well anchored temporary protection devices (silt fence or blaze orange plastic mesh).
  - All protection devices shall be in place prior to any grading or land clearing.
  - All protection devices shall be properly maintained and shall remain in place until construction has ceased.
  - Attachment of signs, fencing or other objects to trees is prohibited.
  - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
- If the critical root zone (see detail) is affected by construction activities such as grade change, digging for foundations and roads or utility installation:
  - Prune roots with a clean cut using proper pruning equipment (see root pruning detail)
  - Water and fertilize as needed.
- During construction phase, monitor and correct condition of retained trees for: soil compaction, root injury, flood conditions, drought conditions and other stress signs.
- Post-Construction Phase
  - Inspect existing trees around the perimeter of disturbed limits for evidence of soil compaction, root injury, limb injury, or other stress signs and correct with proper management techniques such as root or limb pruning, soil aeration, fertilization, crown reduction or watering. Inspection and evaluation shall be performed by a licensed arborist.
  - Inspect for dead or dying trees or limbs which may pose safety hazard and remove.
  - No burial of discarded materials will occur onsite within the conservation areas.
  - No burning within 100 feet of wooded area.
  - All temporary forest protection structures will be removed after construction.
  - Following completion of construction, prior to use, the County inspector shall inspect the entire area.

FOREST CONSERVATION NARRATIVE  
 This Forest Conservation Plan was prepared in accordance with the Howard County Forest Conservation Manual in that priority forest areas were preserved to the greatest extent practical. Disturbance to steep slopes and buffers was minimized. The reforestation requirement for this site is computed to be 1.67 Acres.  
 A Fee-in-lieu is being requested to fulfill the requirements in the amount of **FOR 1.67 ACRES**

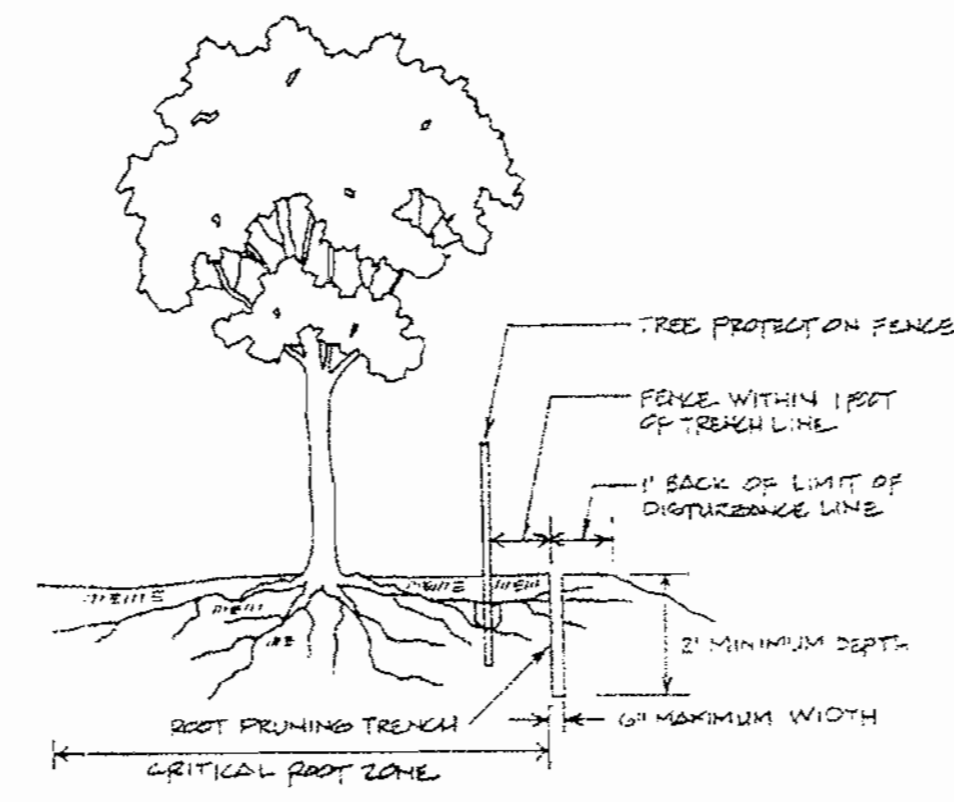
### FOREST CONSERVATION EASEMENT AREA TABLE

EASEMENT 1:	6.53 Ac
TOTAL EASEMENTS:	6.53 Ac

THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY RETENTION OF FOREST RESOURCES ON SITE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 11/30/01 DATE  
 DIRECTOR  
 11/29/01 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 11/20/01 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

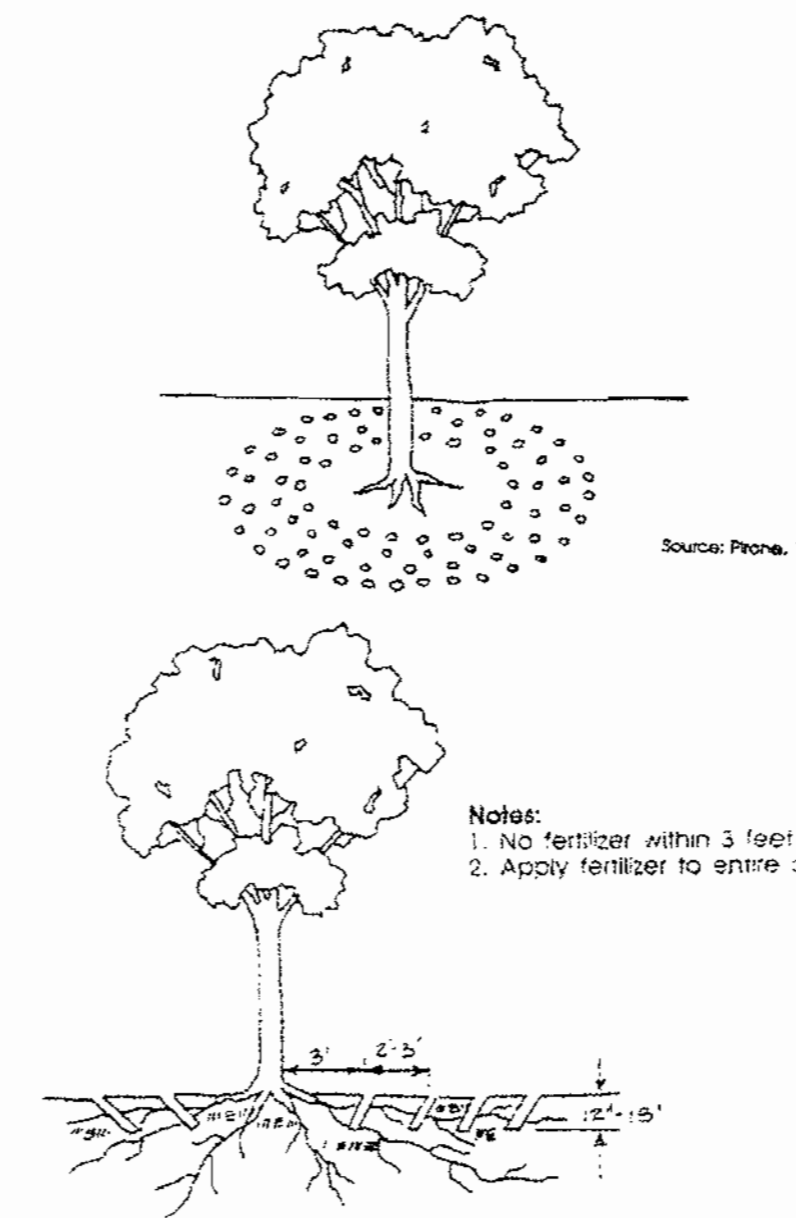
### Root Pruning



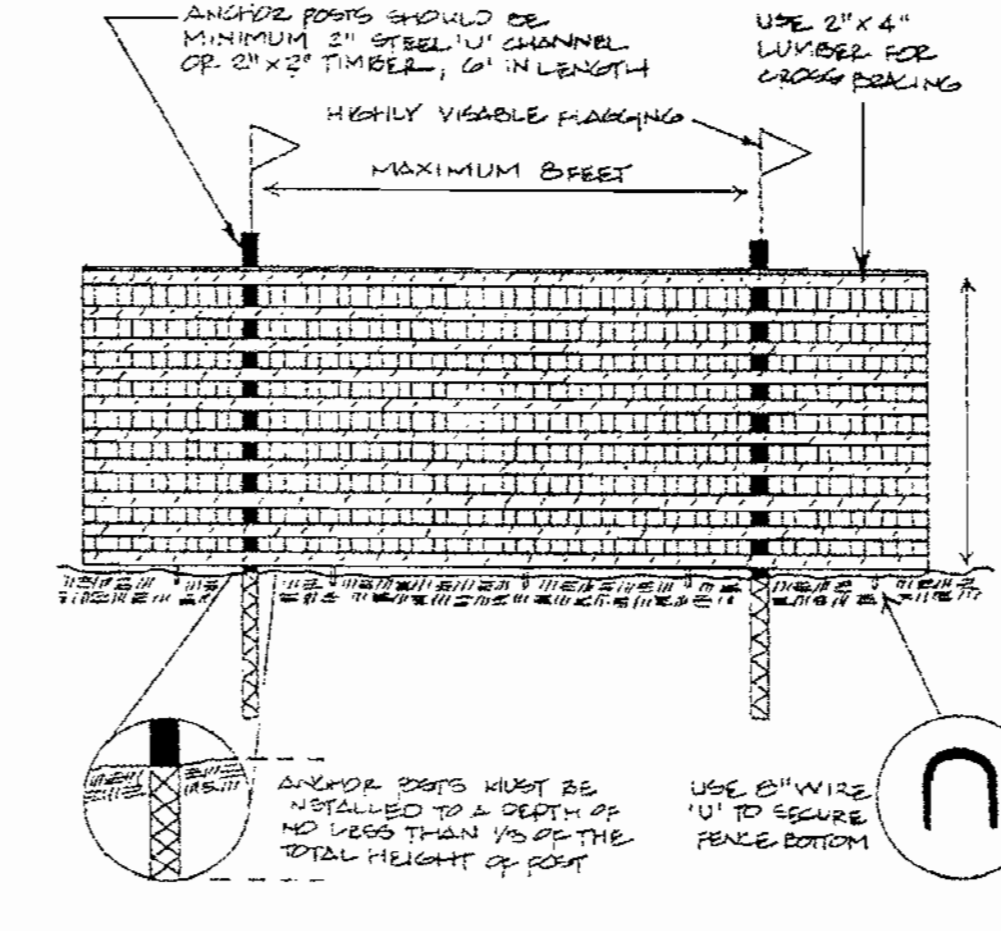
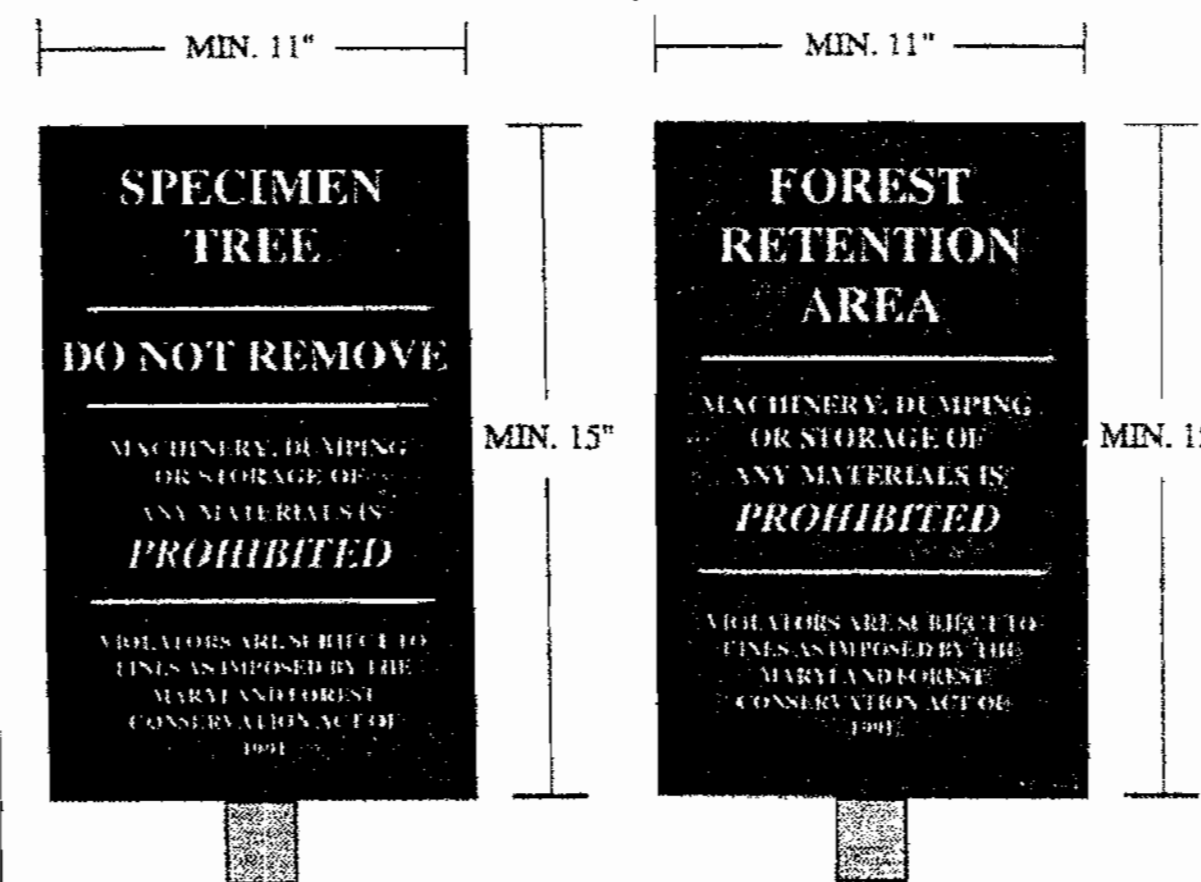
- Notes:
- Retention Areas will be set as part of the review process.
  - Boundaries of Retention Areas should be staked/flagged prior to trenching.
  - Exact location of trench should be identified.
  - Trench should be immediately backfilled with soil removed or other high organic soil.
  - Roots should be cleanly cut using vibratory knife or other acceptable equipment.

Source: City of Gaithersburg, Maryland City Tree Manual

### Application of Fertilizers by Injection



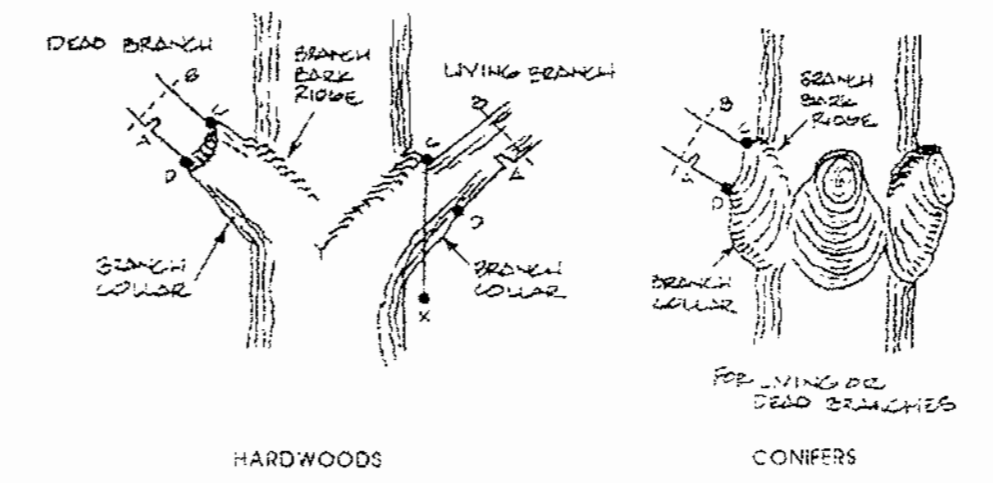
### Blaze Orange Plastic Mesh



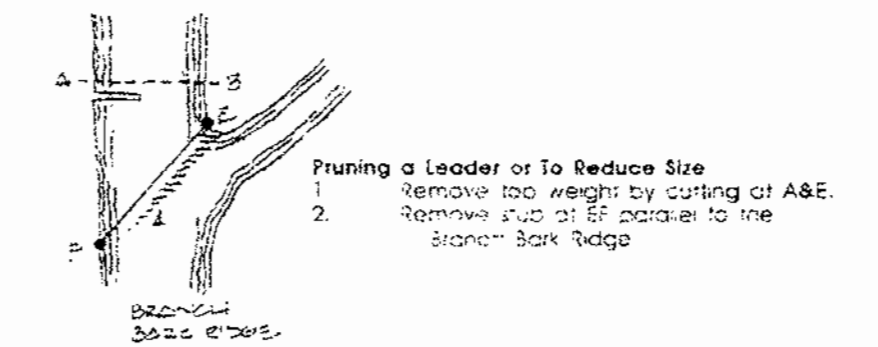
- Notes:
- Forest protection device only.
  - Retention Area will be set as part of the review process.
  - Boundaries of Retention Area should be staked and flagged prior to installing device.
  - Root damage should be avoided.
  - Protective signage may also be used.
  - Device should be monitored throughout construction.

Source: Prince George's County, Maryland Woodland Conservation Manual

### Crown Reduction



- Pruning a branch
- Remove branch weight by undercutting at A and remove limb by cutting through at B.
  - Remove stub at CD (line between branch bark ridge and outer edge of branch collar).
  - If difficult to find on hardwoods, drop vertical from C (line CX). Angle XCY-XCD.



- Notes:
- Only prune at specified times.
  - No more than 30% of crown to be removed at one time.

Source: Fairfax County, Virginia Vegetation Preservation & Planning

### DEVELOPER

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 P.O. Box 130  
 Laurel, Md. 20725

### OWNER

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 ENVIRONMENTAL CONSULTANTS  
 8518 FOREST STR.  
 HISTORIC ELKLOFT CITY, MARYLAND 21043  
 PHONE: (410) 750-1150 FAX: (410) 750-7350

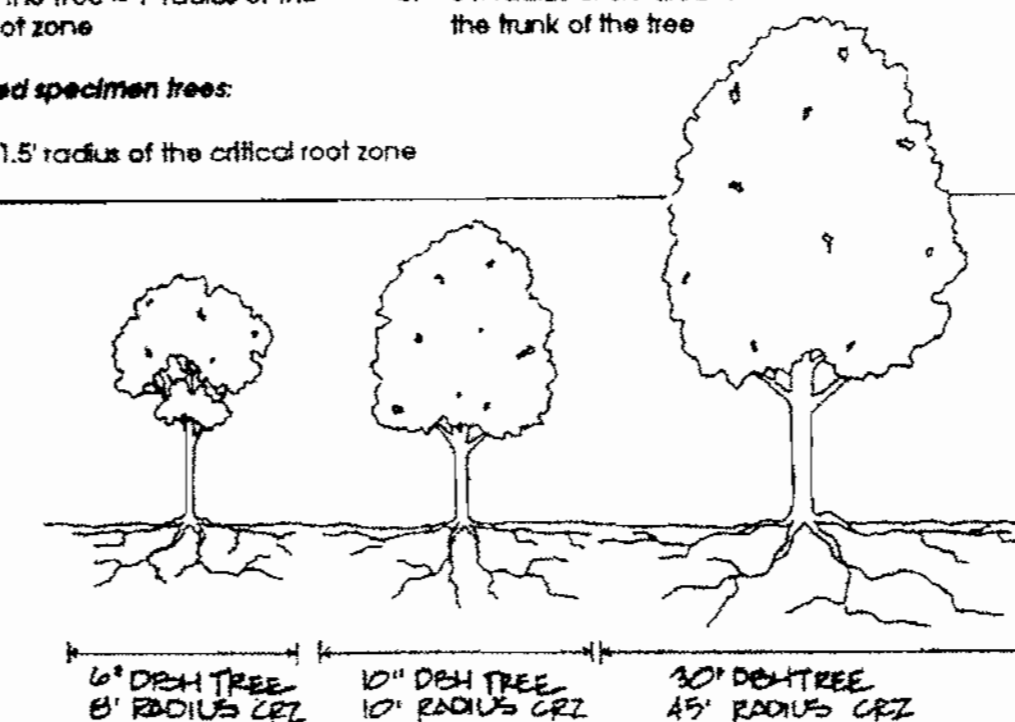
### Critical Root Zone

For the edges of large areas, use the greater of the two choices below:

1" DBH of the tree = 1' radius of the critical root zone or 8 ft radius circle around the trunk of the tree

For isolated specimen trees:

1" DBH = 1.5' radius of the critical root zone



## FOREST CONSERVATION PLAN



TAX MAP #50 GRID #10 PART OF PARCEL 264  
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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DESIGN BY: DDS\_R  
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13 SHEET OF 13